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SUBSURFACE ENVIRONMENTAL INVESTIGATIONS AND CHEMICAL ANALYSIS OF THE AIR CARGO EXPANSION SITE, PIEDMONT TRIAD AIRPORT GREENSBORO, NORTH CAROLINA

Prepared for:

Piedmont Triad Airport Authority
Piedmont Triad International Airport
Greensboro, North Carolina

Trigon Job No. 015-91-036

Prepared by:

Trigon Engineering Consultants, Inc.
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TRIGON
ENGINEERING CONSULTANTS, INC.

Geotechnical, Environmental,
Construction Materials, & Roofing Engineers

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May 7, 1991

Piedmont Triad Airport Authority
Post Office Box 35005
Greensboro, North Carolina 27425

Attention: Mr. Ted Johnson

Reference: Subsurface Environmental Testing with Laboratory Analysis
Air Cargo Expansion/Waste Disposal Site
Piedmont Triad International Airport
Greensboro, North Carolina
Trigon Job No. 015-91-036

Dear Mr. Johnson:

Please find enclosed the site investigation report describing the work performed, laboratory results and our recommendations associated with the subject site.

Trigon Engineering Consultants, Inc. appreciates this opportunity to be of assistance to you during this phase of the investigation. Please feel free to contact us if you have any questions concerning this report at your convenience.

Very truly yours,

TRIGON ENGINEERING CONSULTANTS, INC.

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Enclosures

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1.0 - SITE BACKGROUND INFORMATION AND SCOPE OF INVESTIGATION

Piedmont Triad Airport is in the process of expanding its air cargo handling area which has involved geotechnical soil borings. While making the geotechnical borings, the odor of petroleum was detected in several locations. Further investigation indicated that some of those locations had been used as burn pits during fire-fighting training exercises. As a result, the Airport Authority undertook additional investigations of soil and groundwater to further determine the nature and extent of the existing conditions. The environmental investigation included additional research on the subject site, six hand auger borings, ten soil test borings, and the installation of five groundwater monitoring wells. Results of these investigations are reported herein.

It is our understanding that the torn down former hangar facility was built by the National Guard in the 1960's and was used for aviation maintenance on small airplanes. Subsequently, Wrangler Aviation used the facility as a maintenance hangar until the mid-1970's. After Wrangler moved out of the facility, the Airport Authority used the building for storage of various types of equipment associated with the airport. In addition, there were two 10,000-gallon underground storage tanks (USTs) for aviation fuels adjacent to the building formerly located in that area. The scope of the investigation included analysis of soils and groundwater. Areas of concern were by the torn down hangar facility, the three burn pits in the subject area, trench drain, construction debris, fill material, reported petroleum spill by the tarmac and groundwater quality.

2.0 - FIELD ACTIVITIES

On April 8, 1991, Trigon mobilized a CME-45 all terrain vehicle (ATV) and a CME 55 truck mounted drill rig to the site. During the period from April 8 to April 16, 1991, there were five areas investigated.

Area number one is adjacent to geotechnical soil boring B-3. Petroleum odors were detected in B-3 and the odors seemed to extend to the interface of the soil and groundwater (figure 2). Six soil test borings were placed around geotechnical boring B-3 and one groundwater monitoring well was installed. Near geotechnical boring B-3 there is a trench drain in the concrete apron, and one hand auger boring was placed by the drain outlet.

Area number two is in the vicinity of geotechnical soil boring B-4 which is beside the burn pits. Two soil test borings, three hand auger borings and one groundwater monitoring well were located adjacent these pits.

Area number three is adjacent to geotechnical soil boring B-20. Petroleum odors were noted in the soil samples while drilling B-20. Two soil test borings and one groundwater monitoring well were placed around B-20.

Area number four is adjacent to geotechnical soil borings B-18 and B-19. The area of concern is located at the base of the fill slope east of B-18 and B-19. Two hand auger borings and one groundwater monitoring well were placed in this area.

The fifth and final area of investigation involved groundwater quality upgradient of the four other areas. An upgradient well was installed adjacent to geotechnical soil boring B-8.

2.1 - Hand Auger Samples

Hand auger borings were made in three areas on site. Prior to and during boring activities, the hand auger was decontaminated with a high pressure steam cleaner. The first area included three hand auger borings in the three burn pits by geotechnical boring B-4. One soil sample was taken from each burn pit for analysis of total petroleum hydrocarbons (TPH) by gas chromatography using EPA Methods 3550 and 5030. In addition to the TPH sample, one sample taken from burn pit #2 was analyzed for waste characterization by toxic characteristic leachate procedure (TCLP) for RCRA metals. The second area is adjacent to geotechnical soil borings B-18 and B-19. Two hand auger borings were made to a depth of two feet down slope and east from the geotechnical borings B-18 and B-19. Soil samples from both hand auger borings were composited for laboratory analysis for priority pollutant compounds. The third area of concern is located west of geotechnical boring B-3. A trench drain on the concrete apron by the torn down hangar had one hand auger boring made to a depth of four feet. The boring was located at the drain outlet. One soil sample was selected for analysis of total petroleum hydrocarbons by EPA Methods 3550 and 5030.

The soil samples selected for laboratory analysis by OVA screening (Table 1) were placed in laboratory prepared jars. The jars were stored in coolers (4° C) for shipment to a North Carolina certified laboratory.

2.2 - Soil Test Borings

Preceding drilling activities at the site, the drill rig and auger tools were decontaminated with a high pressure steam cleaner to prevent the possible introduction of contamination to the site. During the boring activities, the drill rig and tools were decontaminated using a high pressure steam cleaner between each hole to prevent the possibility of cross-contamination of boreholes. Soil samples were retrieved by means of a split-spoon sampling device during drilling. The split-spoon was decontaminated in a solution of Alconox detergent and distilled water between samples and steam cleaned between each boring.

Trigon made ten soil test borings at the site (Figure 2). The soil test borings were advanced with 3-1/4 inch inside diameter hollow-stem augers (HSA) and by driving a split-spoon sampler for collection of soil samples (Appendix A).

The soil test borings were made in three separate areas of the site. The first area of concern is adjacent to geotechnical soil boring B-3. Six soil test borings were performed in this area to depths of approximately 20 feet with split-spoon sampling at 2.5 foot intervals. One soil sample per soil test boring was analyzed for TPH by EPA Methods 3550 and 5030. The second area of concern is adjacent to geotechnical soil boring B-20. Trigon made two soil test borings in the immediate area of B-20 to depths of 10 feet with split-spoon sampling at 2.5 foot intervals. The soil samples retrieved from the borings adjacent to geotechnical boring B-20 were analyzed for TPH by EPA Methods 3550 and 5030. The third area of concern was adjacent to geotechnical soil boring B-4 (burn pits). Two soil test borings were performed in this area to depths of approximately 20 feet with split-spoon sampling at 2.5 foot intervals. The soil samples were retrieved from the borings adjacent to geotechnical boring B-4 were analyzed for TPH by EPA Methods 3550 and 5030.

The soil samples were screened in the field with an OVA for volatile organics which indicate the relative concentration of volatile organic compounds in the soil sample (Table 1). The OVA operates by flame ionization detection (FID). OVA screening for the soil samples revealed 0 to 320 parts per million (ppm). In addition to screening for total volatile organics, the soil samples were screened for methane with an activated charcoal sample probe. The OVA screening for methane ranged from 0 to 90 ppm. After the samples were screened in the field they were placed in laboratory prepared containers for shipment to a North Carolina certified laboratory, Aquachem, Inc., for analysis.

2.3 - Groundwater Monitoring Wells

Trigon constructed five groundwater monitoring wells at the subject site (Figure 2). The drill rig and tools were decontaminated prior to and during drilling activities with a high pressure steam cleaner. During well construction and installation, Trigon personnel wore latex gloves to prevent contamination of the drill tools and the well construction material. The wells were constructed using 6-1/4 inch inside diameter hollow stem augers. The depths of the wells range from 22.0 to 25.0 feet below the ground surface (Appendix B).

The soil samples which were retrieved using a split-spoon sampler during the well boring activities, were screened in the field with an OVA (Table 2). The soil samples screened by the OVA had results of 0 to 500 ppm in wells MW-1, MW-2, MW-3, MW-4 and MW-5.

The groundwater monitoring wells were located adjacent to the five areas of investigation. Monitoring well MW-1 is located by geotechnical soil boring B-8. This monitoring well is an upgradient well, for site background data. MW-2 is located by geotechnical boring B-4. This area is adjacent to the burn pits. MW-3 is located by geotechnical soil boring B-3. A petroleum odor was noted in this area in the upper soil and OVA results indicated contamination extended to the groundwater. MW-4 is located by geotechnical soil boring B-18. This area is where fill material and demolition debris has been

placed. MW-5 is located by geotechnical soil test boring B-20. A petroleum odor was noted in the soil and a groundwater monitoring well was installed in this area.

The groundwater monitoring wells were constructed of 2-inch diameter Schedule 40 PVC pipe and screens with a slot size of 0.010 inch (Appendix B). Once the borings were terminated, the well screen (PVC pipe) was inserted into the soil boring. A solid piece of 2-inch PVC pipe was then screwed into the screen section and extended approximately 2.0 to 2.5 feet above the ground surface. A fine filter sand pack was placed around the screen and extended 2 feet above the top of the screen. A 2-foot sealing layer of bentonite pellets were placed above the sand pack to prevent overlying material from entering the screen area. Next, a grout pack was constructed using portland cement. Finally, a protective stick-up cover with a lock was installed to prevent unauthorized tampering of the groundwater monitoring well.

The groundwater monitoring wells were developed with an oilless pneumatic bladder pump. Between 15 to 35 gallons of water were removed from each well which was equivalent to approximately 4.2 to 20.5 well volumes for each well. Well volume for each well on the day it was developed was approximately 2.0 gallons for MW-1, 2.4 gallons for MW-2, 2.7 gallons for MW-3, 2.7 gallons for MW-4, and 2.5 gallons for MW-5. Field measurements were taken from the wells prior to sampling. The measurements included static water levels, temperature, pH, well volume and OVA screening (Table 3). Prior to sampling of the wells, three well volumes were purged by use of a dedicated laboratory prepared bailer. At groundwater monitoring well MW-4, an equipment blank was made on the dedicated bailer prior to purging and sampling. The purpose of the equipment blank is to verify field sampling practices and laboratory analytical procedures. The water samples and equipment blanks were placed in laboratory prepared containers which were screened with an OVA for volatile organics. The water samples collected were analyzed for TPH by EPA Method 3550 and 5030, volatile organics by EPA Method 601 and 602, and total RCRA metals. The water samples collected for metals were filtered in the field with a 0.45 micron filter. The purpose of filtering the water sample was to remove some suspended particles that could interfere with the metals analysis. The samples were packaged in coolers with ice packs (4° C) for shipment to Aquachem, Inc. for analysis.

3.0 - HYDROGEOLOGY

The site is located in the Carolina Slate Belt and in the Piedmont physiographic province of North Carolina. The unconsolidated section consists of fill material on top of alluvial material which rests on residual material. The alluvial material is 15 to 22 feet thick. It is a blue grey sandy silt. Below the alluvial material is a residual material. It is a tan brown sandy silt. Partially weathered rock was encountered in MW-4 at a depth of approximately 15 feet. The underlying bedrock at the site consists of a metamorphosed gabbro and/or diorite rock according to the 1985 Geologic Map of North Carolina.

The groundwater depths at the site varied from 6.9 feet (MW-3) to 11.7 feet (MW-1) beneath the ground surface (Table 3). Relative elevations for the monitoring wells with respect to a bench mark established on site were measured at the top of the concrete pad surrounding the protective stick-up cover (Figure 3). Groundwater table elevations indicate that the groundwater is migrating in a northeasterly direction on the site (Figure 3). The groundwater appears to be discharging downslope to the east of MW-4 in a swampy area. Groundwater flow rates were not determined.

4.0 - LABORATORY ANALYSIS

4.1 - Soil Analysis

The soil samples retrieved adjacent to geotechnical soil boring B-4 were analyzed for total petroleum hydrocarbons (TPH). In addition to the TPH analysis, one sample was analyzed for leachable metals. The laboratory results for the soil, as reported by Aquachem, Inc., revealed petroleum hydrocarbons in soil samples from BP-1, BP-2, BP-3, STB-1, and STB-2 (Table 4). The sample results ranged from a low of 11 parts per million (ppm) to a high of 14,302 ppm which were similar to fuel oils. The sample analysis for gasoline revealed 1 part per million (ppm) in BP-3, STB-1, STB-2, STB-3 and 971 ppm in BP-1. The soil sample from MW-2 did not reveal petroleum hydrocarbons above detection limits. In addition to the TPH samples, one sample (BP-2) was analyzed for leachable metals and none were detected.

The soil samples retrieved near geotechnical boring B-3 were analyzed for total petroleum hydrocarbons, and one sample was analyzed for leachable metals. The seven soil samples taken adjacent to geotechnical soil boring B-3 revealed less than 10 ppm for fuel oils (Table 5). Analysis for gasoline indicated two of the soil test borings, B-3W and MW-3 contained 9 and 54 ppm, respectively. The soil sample which was collected from B-3S was also tested for metals. The analysis did not reveal any metals above detection limits.

The soil samples from the area adjacent to geotechnical boring B-20 were analyzed for total petroleum hydrocarbons. The laboratory analysis, as reported by Aquachem, Inc., did not reveal any petroleum hydrocarbons above detection limits (Table 6).

The soil sample taken by geotechnical boring B-18 and B-19 taken at the base of the fill slope in the swampy area was analyzed for priority pollutant compounds. The analysis for metals revealed chromium at 4.3 milligrams per liter (mg/l), copper at 22.6 mg/l, lead at 13.3 mg/l, nickel at 3.95 mg/l, and zinc at 27.5 mg/l (Table 7). In addition to the metals identified, benzene was present at 239 micrograms per kilogram (μg/kg) and toluene at 246 μg/kg. The soil sample analyzed for TPH near (TD-HA1) geotechnical soil boring B-3 adjacent to the torn down hangar did not reveal petroleum hydrocarbons above detection limits.

4.2 - Groundwater Analysis

The groundwater samples and equipment blank were analyzed for total petroleum hydrocarbons, volatile organic compounds and total RCRA metals. The analysis revealed substances which are above North Carolina water quality standards (NCWQS) (Appendix C). The water samples analyzed for metals did not contain any compounds above detection limits. The analysis for total petroleum hydrocarbons revealed petroleum hydrocarbons in monitoring wells MW-1 through MW-5 (Table 8). Concentrations ranged from less than 0.1 milligrams per liter to 5 milligrams per liter (mg/l). Benzene was present in monitoring wells MW-3 and MW-4 above state standards. The other compounds which were identified in MW-3 above state standards are tetrachloroethene and 1,4-dichlorobenzene. One compound which all wells shared in common was chloroform. The amount detected range from 8 µg/1 to 43 µg/l. The chloroform could be a breakdown product of tetrachloroethene or dichlorobenzene coming in contact with organic material in the fill. At every monitoring well location, fill material was encountered. Monitoring well MW-4 had an equipment blank performed on its bailer prior to sampling. The equipment blank did identify toluene and methylene chloride above detection limits. The methylene chloride was additionally present in MW-5. It is not a primary contaminant. It is a suspected laboratory artifact.

5.0 - CONCLUSIONS AND RECOMMENDATIONS

The majority of the sample locations tested revealed evidence of petroleum at the hydrocarbons site. The impact is present in the soil and in the groundwater. Existing data from both field and laboratory data indicate the following:

1. The area adjacent to geotechnical soil boring B-4 (burn pit) did contain petroleum hydrocarbons in the soil. The highest concentrations were noted in burn pit number 1. The groundwater revealed toluene and chloroform. The concentration of chloroform exceeds state water quality standards but toluene is below standards. The vertical and horizontal extent of the soil impact is not completely defined and extent of groundwater impact is not fully known. Due to the high concentrations of petroleum hydrocarbons in the soils, it is likely that groundwater problem will persist and may increase.

2. The soil samples retrieved adjacent to geotechnical boring B-3 indicate limited impact to the soil. The areal extent of the impact is fairly well defined. Groundwater in the area contains benzene, tetrachloroethene, chloroform and 1,4 dichlorobenzene above state standards. Toluene is very close to state groundwater quality standards. The horizontal extent of the groundwater impact is not known at this time. Other chemicals were also identified but they were below state water quality standards.

3. The groundwater at the base of the fill slope by geotechnical borings B-18 and B-20 exceeds state limits for benzene. The groundwater in MW-4 by B-18 revealed benzene and chloroform above state standards. The groundwater beneath the fill slope could be impacting the soil in HA-1 and HA-2.

4. The area around geotechnical soil boring B-20 does not appear to have petroleum hydrocarbon in the soil. Chloroform exceeds state groundwater limits.

5. The groundwater around geotechnical boring B-8 (MW-1) revealed a petroleum hydrocarbon blend similar to fuel oil. Chloroform was also present in the groundwater and exceeds the state groundwater quality standards. The source of the oil is not known, but is apparently southwest and upgradient of MW-1.

6. No problem was noted by the trench drain (TD-HA1) in the soils.

7. The hydraulic gradient, as determined from the static water levels for the five monitoring wells, indicates that the groundwater is migrating beneath the study area in a northeasterly direction. The full extent of groundwater impact is not known at this time.

Trigon recommends the following items be performed as further investigation:

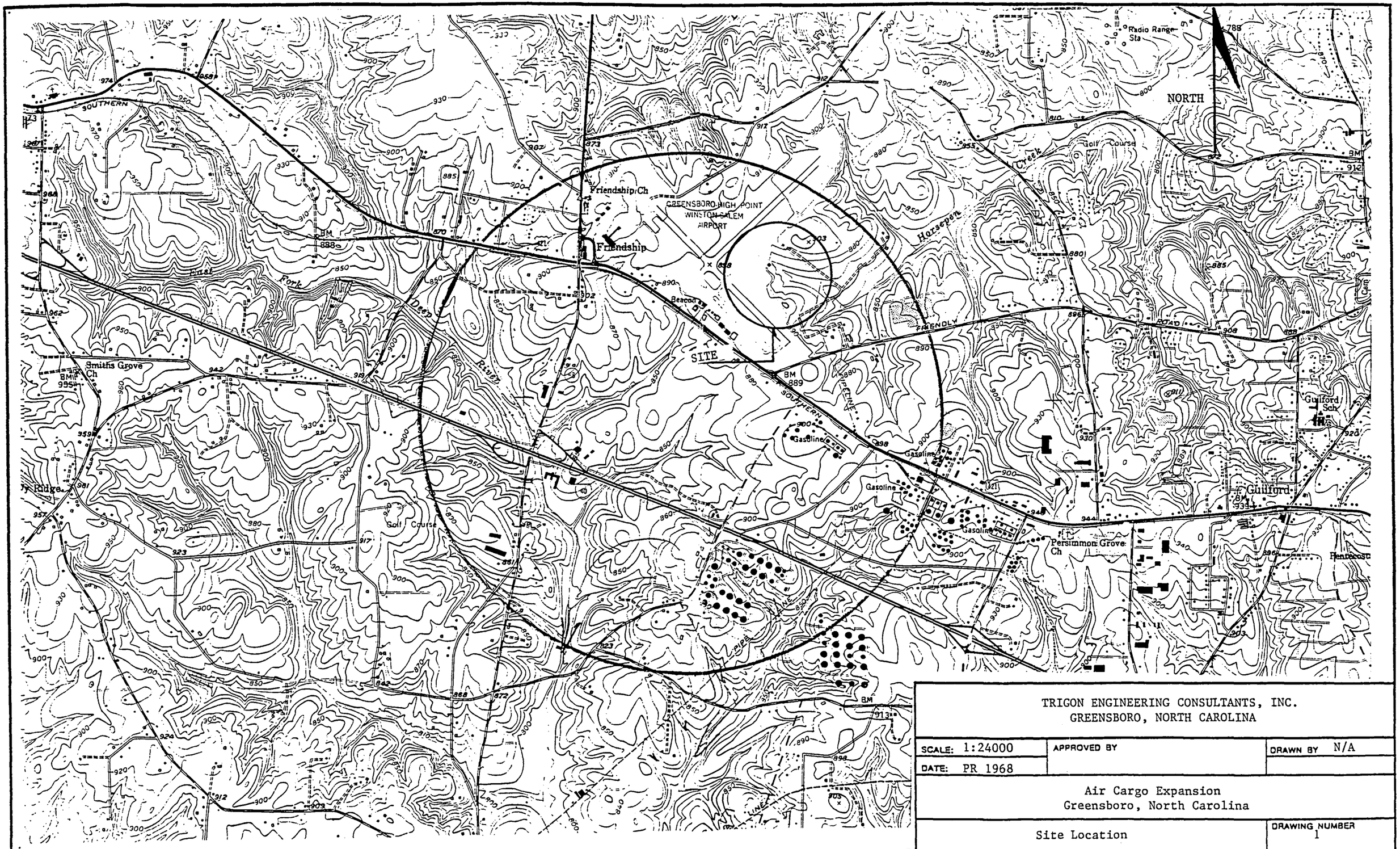
1. Determine the full extent of the groundwater impact as described in this report. Monitoring wells MW-3 and MW-4 both contained benzene above state standards. Additional investigation is needed in these areas. Monitoring well MW-1 is the upgradient well. Fuel oils are present in the groundwater at this location. Further investigation is needed to determine the source of the fuel oils.

2. Resample the existing groundwater monitoring wells in three months. This information will help determine the rate contaminant concentration change.

3. Determine the extent of petroleum hydrocarbon in the soil at the burn pits.

4. Determine the extent of soil impact in the area east of geotechnical soil borings B-18 and B-19.

FIGURES



TRIGON ENGINEERING CONSULTANTS, INC.
GREENSBORO, NORTH CAROLINA

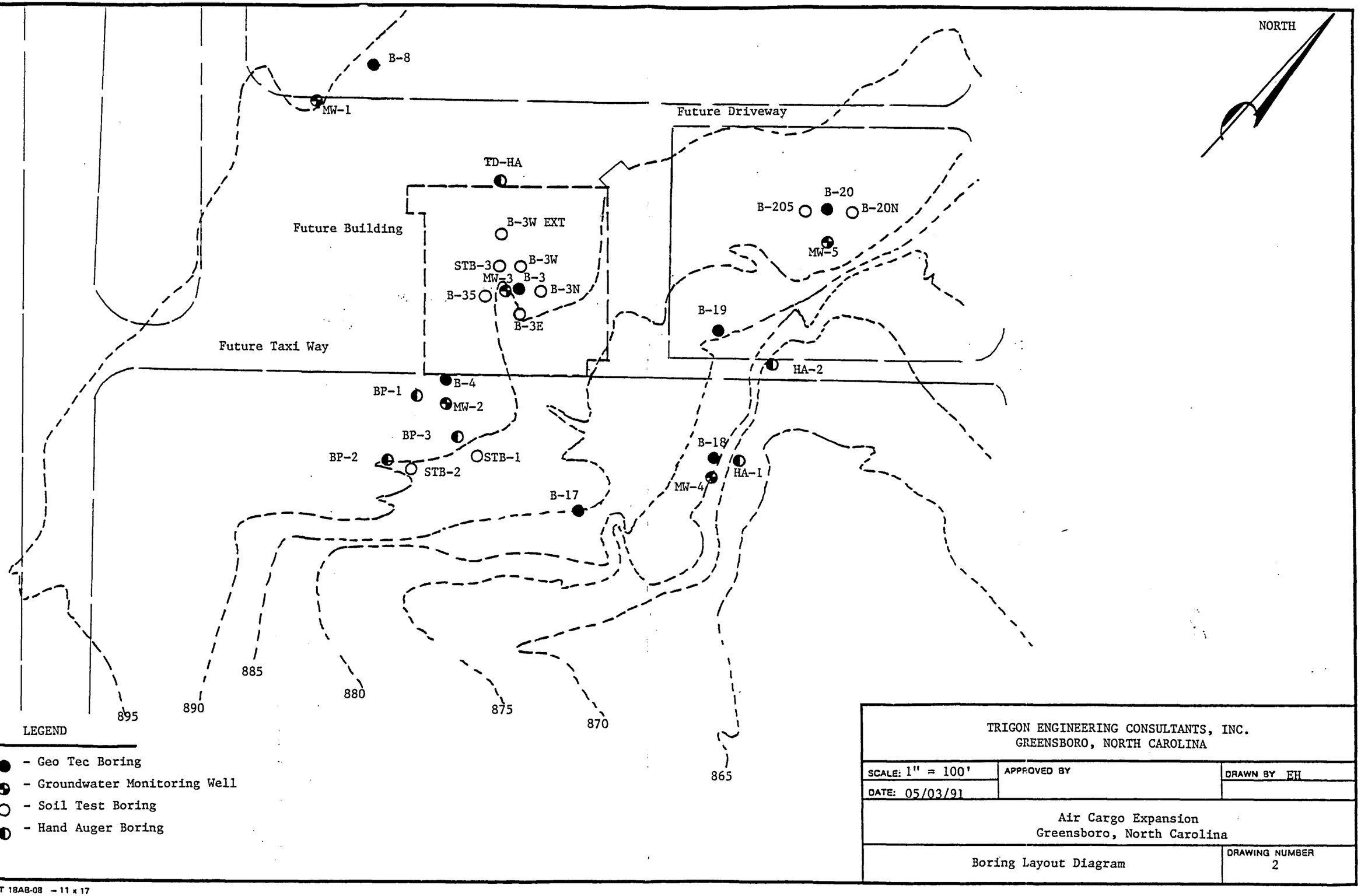
SCALE: 1:24000	APPROVED BY	DRAWN BY N/A
DATE: PR 1968		

Air Cargo Expansion
Greensboro, North Carolina

Site Location

DRAWING NUMBER 1

TELEDYNE POST 18A8-08 – 11 x 17



TRIGON ENGINEERING CONSULTANTS, INC.
GREENSBORO, NORTH CAROLINA

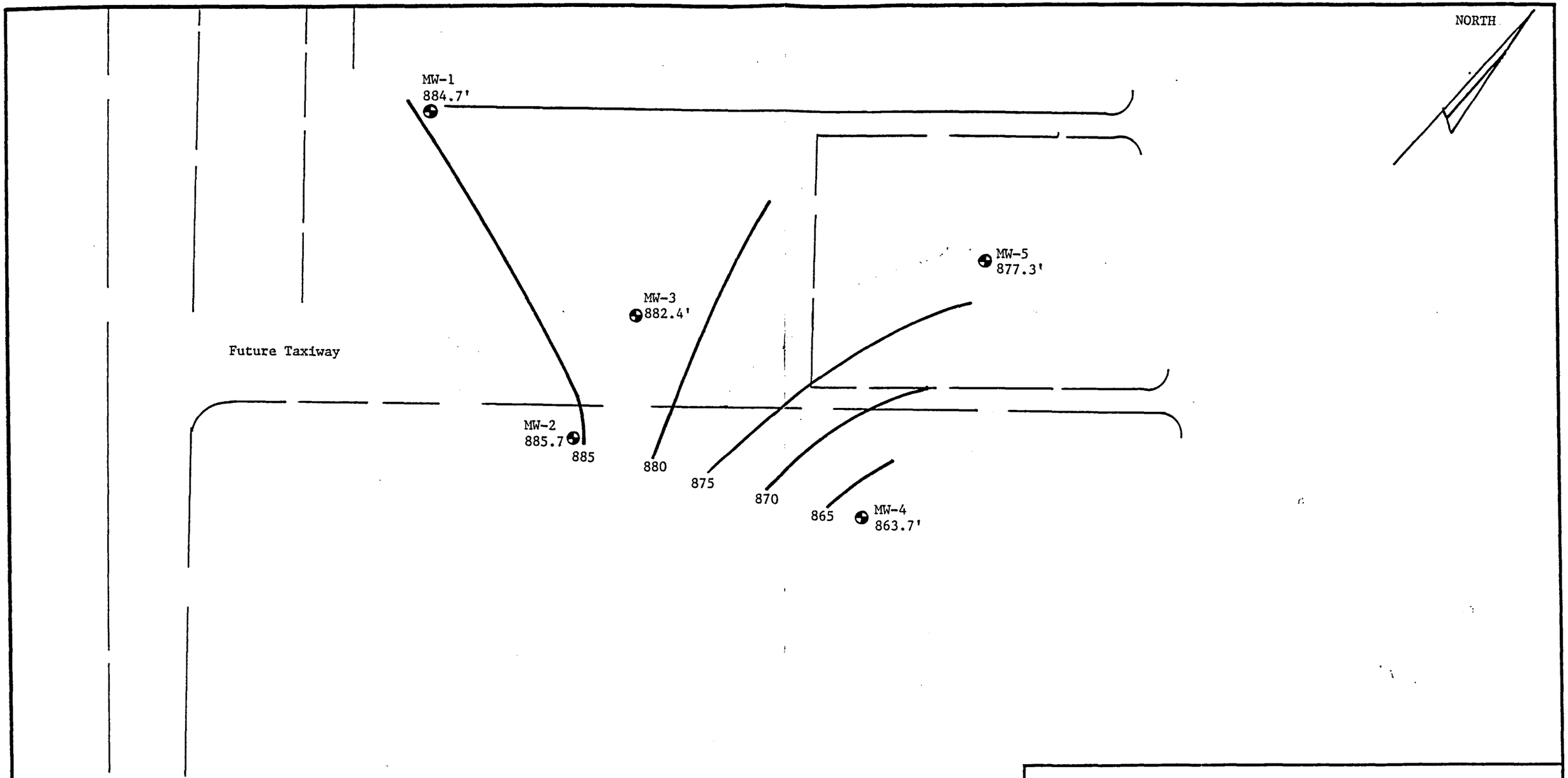
SCALE: 1" = 100'	APPROVED BY	DRAWN BY EH
DATE: 05/03/91		

Air Cargo Expansion
Greensboro, North Carolina

Boring Layout Diagram

DRAWING NUMBER 2

TELEDYNE POST 18AB-08 – 11 x 17



LEGEND

● - Groundwater Monitoring Well

TRIGON ENGINEERING CONSULTANTS, INC. GREENSBORO, NORTH CAROLINA		
SCALE: 1" = 100'	APPROVED BY	DRAWN BY JSP
DATE: 05/05/91		
Air Cargo Expansion Greensboro, North Carolina		
Elevation of Groundwater Table		DRAWING NUMBER 3

TELEDYNE POST 18AB-08 – 11 x 17

TABLES

TRIGON ENGINEERING CONSULTANTS, INC.
SUMMARY OF OVA MONITORING
TABLE 1

Job Name: Air Cargo Expansion
Job Location: Greensboro, North Carolina
Job No: 015-91-036
Date: April 10, 1991

Boring	Sample Number	Depth (feet)	OVA[1] (Field) (ppm)[2] Normal/Methane Tip	Comments
BP-1	1	0 - 1.0	180-360/4	Odor
	2	1.0 - 2.0	320/20	Odor
	3	2.0 - 3.0	220/0	Odor - S.T. 6:00 P.M. TPH
	4	3.0 - 4.0	200/0	Odor
	5	4.0 - 5.0	260/0	Odor
BP-2	1	0 - 1.0	30/--	Odor
	2	1.0 - 2.0	120/--	Odor - Comp TCLP
	3	2.0 - 3.0	180/--	Odor
	4	3.0 - 4.0	88/--	Odor
	5	4.0 - 5.0	140/--	Odor
	6	5.0 - 6.0	130/--	Odor - S.T. 6:10 P.M. TPH
BP-3	1	0 - 1.0	10	
	2	1.0 - 2.0	8.5	S.T. 6:15 P.M. TPH
	3	2.0 - 3.0	3	
	4	3.0 - 4.0	.75	
	5	4.0 - 5.0	.80	
	6	5.0 - 6.0	.60	
STB-2 BURN PIT#2	1	1.0 - 2.5	0/0	No odor
	2	3.5 - 5.0	0/1	No odor
	3	6.0 - 7.5	0/1	No odor
	4	8.5 - 10.0	0/4	No odor
	5	11.0 - 12.5	0/3	No odor
	6	13.5 - 15.0	4/1	No odor
	7	16.0 - 17.5	0/0	No odor
	8	18.5 - 20.0	6/4	No odor - S.T. 5:52 P.M. - TPH - Top of Bedrock 20.0'

TRIGON ENGINEERING CONSULTANTS, INC.
SUMMARY OF OVA MONITORING
TABLE 1 - Continued

Job Name: Air Cargo Expansion
Job Location: Greensboro, North Carolina
Job No: 015-91-036
Date: April 10, 1991

Boring	Sample Number	Depth (feet)	OVA[1] (Field) (ppm)[2] Normal/Methane Tip	Comments
STB-1 BURN PIT #3	1	1.0 - 2.5	0/0	No odor
	2	3.5 - 5.0	0/0	No odor
	3	6.0 - 7.5	0/.5	No odor
	4	8.5 - 10.0	0/0	No odor
	5	11.0 - 12.5	0/0	No odor
	6	13.5 - 15.0	0/0	No odor
	7	16.0 - 17.5	200/90	Slight odor - S.T. 3:45 PM
	8	18.5 - 20.0	9/4	No Odor Top of Bedrock 20.0'
B-3W	1	1.0 - 2.5	0/10	No odor
	2	3.5 - 5.0	0/0	No odor
	3	6.0 - 7.5	0/0	No odor
	4	8.5 - 10.0	50/30	No odor
	5	11.0 - 12.5	100/30	Odor
	6	13.5 - 15.0	20/20	Odor
	7	16.0 - 17.5	25/20	Odor
	8	18.5 - 20.0	0/0	No odor
B-3N	1	1.0 - 2.5	0/10	No odor
	2	3.5 - 5.0	0/0	No odor
	3	6.0 - 7.5	0/0	No odor
	4	8.5 - 10.0	0/0	No odor
	5	11.0 - 12.5	0/0	No odor
	6	13.5 - 15.0	1/1	No odor
	7	16.0 - 17.5	1.5/1	No odor
	8	18.5 - 20.0	2/2	No odor

TRIGON ENGINEERING CONSULTANTS, INC.
SUMMARY OF OVA MONITORING
TABLE 1 - Continued

Job Name: Air Cargo Expansion
Job Location: Greensboro, North Carolina
Job No: 015-91-036
Date: April 8, 1991

Boring	Sample Number	Depth (feet)	OVA[1] (Field) (ppm)[2] Normal/Methane Tip	Comments
B-3S	1	1.0 - 2.5	5/20	No odor
	2	3.5 - 5.0	0/20	No odor
	3	6.0 - 7.5	10/20	No odor
	4	8.5 - 10.0	50/40	Slight odor
	5	11.0 - 12.5	60/30	Slight odor
	6	13.5 - 15.0	70/30	Slight odor
	7	16.0 - 17.5	40/20	No odor - S.T. 2:30 P.M.
	8	18.5 - 20.0	20/25	Slight Odor
B-3E	1	1.0 - 2.5	1.5/10	No odor
	2	3.5 - 5.0	0/0	No odor
	3	6.0 - 7.5	0/0.5	No odor
	4	8.5 - 10.0	0/0	No odor
	5	11.0 - 12.5	0/0.5	No odor
	6	13.5 - 15.0	1.5/1.5	No odor
	7	16.0 - 17.5	2/4	No odor - S.T. 2:30 PM TPH
	8	18.5 - 20.0	2/2.5	No odor
B-3WEX	1	1.0 - 2.5	0/0	No odor
	2	3.5 - 5.0	0/0	No odor
	3	6.0 - 7.5	0/0	No odor
	4	8.5 - 10.0	0/0	No odor
	5	11.0 - 12.5	0/0	No odor
	6	13.5 - 15.0	0/0	No odor
	7	16.0 - 17.5	0/0	No odor - S.T. 4:00 PM TPH
	8	18.5 - 20.0	3/10	No odor

TRIGON ENGINEERING CONSULTANTS, INC.
SUMMARY OF OVA MONITORING
TABLE 1 - Continued

Job Name: Air Cargo Expansion
Job Location: Greensboro, North Carolina
Job No: 015-91-036
Date: April 10, 1991

Boring	Sample Number	Depth (feet)	OVA[1] (Field) (ppm)[2] Normal/Methane Tip	Comments
B-20N	1	1.0 - 2.5	0/10	No odor
	2	3.5 - 5.0	1/8	No odor
	3	6.0 - 7.5	3/12	No odor
	4	8.5 - 10.0	10/4	No odor - S.T. 1:10 P.M. Top of Bedrock 10.0 feet
B-20S	1	1.0 - 2.5	0/10	No odor
	2	3.5 - 5.0	0/0	No odor
	3	6.0 - 7.5	.5/1	No odor
	4	8.5 - 10.0	1/2	No odor - S.T. 2:15 P.M. Top of Bedrock 10.0 feet

Notes: [1]Organic Vapor Analyzer (OVA) measures the concentration of organic vapors in the air.
[2]ppm = parts per million
S.T. = Sample Time

TRIGON ENGINEERING CONSULTANTS, INC.
SUMMARY OF OVA MONITORING
TABLE 2

Job Name: Air Cargo Expansion
Job Location: Greensboro, North Carolina
Job No: 015-91-036
Date: April 8, 1991

Boring	Sample Number	Depth (feet)	OVA[1] (Field) (ppm)[2] Normal/Methane Tip	Comments
MW-1	1	1.0 - 2.5	0	
	2	3.5 - 5.0	.2	
	3	6.0 - 7.5	0	
	4	8.5 - 10.0	0	
	5	11.0 - 12.5	0	
	6	13.5 - 15.0	0	
	7	16.0 - 17.5	0	
	8	18.5 - 20.0	0	
	9	21.0 - 22.5	0	
	10	23.5 - 25.0	.2	
MW-2	1	1.0 - 2.5	0	
	2	3.5 - 5.0	0	
	3	6.0 - 7.5	0	
	4	8.5 - 10.0	0	
	5	11.0 - 12.5	0	
	6	13.5 - 15.0	0	
	7	16.0 - 17.5	12	S.T. 4:11 P.M.
	8	18.5 - 20.0	0	
	9	21.0 - 22.5	.4	
MW-3	1	1.0 - 2.5	0/8	No odor/6"
	2	3.5 - 5.0	15/10	No odor/12"
	3	6.0 - 7.5	100/50	Slight odor/10"
	4	8.5 - 10.0	150/30	Odor/12"
	5	11.0 - 12.5		No recovery
	6	13.5 - 15.0	300/100	Odor/8"
	7	16.0 - 17.5	30/20	No odor/8"
	8	18.5 - 20.0	10/10	No odor/6"
	9	21.0 - 22.5	1/3	No odor/10"
	10	23.5 - 25.0	1/2	No odor Res./12"

TRIGON ENGINEERING CONSULTANTS, INC.
SUMMARY OF OVA MONITORING
TABLE 2 - Continued

Job Name: Air Cargo Expansion
Job Location: Greensboro, North Carolina
Job No: 015-91-036
Date: April 8, 1991

Boring	Sample Number	Depth (feet)	OVA[1] (Field) (ppm)[2] Normal/Methane Tip	Comments
MW-4	1	1.0 - 2.5	0	Asphalt
	2	3.5 - 5.0	0.8	Asphalt
	3	6.0 - 7.5	0.8	Asphalt
	4	8.5 - 10.0	8.5/4.5	Asphalt
	5	11.0 - 12.5		No Recovery
	6	13.5 - 15.0	77/85	
	7	16.0 - 17.5	2.5/3.5	
	8	18.5 - 20.0	9/4.5	
MW-5	1	1.0 - 2.5	0	
	2	3.5 - 5.0	0.2	
	3	6.0 - 7.5	4.5/8	
	4	8.5 - 10.0	50/95	
	5	11.0 - 12.5	9.5/4.5	
	6	13.5 - 15.0	20-50/28	
	7	16.0 - 17.5	500/250	S.T. 10:00 A.M.
	8	18.5 - 20.0	30/30	
	9	21.0 - 22.5	2.5	
	10	23.5 - 25.0	.6	

Notes: [1]Organic Vapor Analyzer (OVA) measures the concentration of organic vapors in the air.
[2]ppm = parts per million
S.T. = Sample Time

TABLE 3

Field Measurements - Groundwater Monitoring Wells
Piedmont Triad International Airport
Air Cargo Expansion
Greensboro, North Carolina
015-91-036

April 15 and 16, 1991*	MW-1	MW-2	MW-3	MW-4	MW-5
pH Beginning	5.5	5.3	6.2	6.2	6.3
pH Final	5.6	5.5	6.3	6.2	6.5
Temperature °C Beginning	17.5	17.7	14.6	16.9	14.4
Temperature °C Final	17.2	18.8	15.3	16.0	14.7
Surface Elevation (feet)	895.3	893.0	889.3	872.4	887.2
Static Water Level[1] (feet)	484.7	885.7	882.4	863.7	877.3
Depth to Water (feet)	10.6	7.3	6.9	8.7	9.9
Total Depth (feet)	24.5	23.0	24.5	20.5	25.0
Well Volume (gallon)	2.0	2.4	2.7	2.7	2.5
OVA Screening (ppm)	0	0	4.0	0	4.0

[1]Static water levels measured on May 4, 1991
*Date field measurements taken.
OVA - Organic Vapor Analyzer
ppm - Parts Per Million

TABLE 4

Piedmont Triad International Airport
Air Cargo Expansion
Greensboro, North Carolina
015-91-036

Sample Location	Analysis Method EPA 3550*	Analysis Method EPA 5030*
BP-1: 2.0 - 3.0 feet	14,302	971
BP-2: 5.0 - 6.0 feet	2,044	221
BP-3: 1.0 - 2.0 feet	40	<1
STB-1: 16.0 - 17.5 feet	10	<1
STB-2: 18.5 - 20.0 feet	11	<1
MW-2: 16.0 - 17.5 feet	<10	<1

*Sample results reported in milligrams per kilogram

TABLE 5

Piedmont Triad International Airport
Air Cargo Expansion
Greensboro, North Carolina
015-91-036

Sample Location	Analysis Method EPA 3550*	Analysis Method EPA 5030*
B-3S	<10	<1
B-3W	<10	9
B-3N	<10	<1
B-3E	<10	<1
B-3W Extension	<10	<1
MW-3	<10	54
STB-3	<10	<1

*Sample results reported in milligrams per kilogram

TABLE 6

Piedmont Triad International Airport
Air Cargo Expansion
Greensboro, North Carolina
015-91-036

Sample Location	Analysis Method EPA 3550*	Analysis Method EPA 5030*
B-20N	<10	<1
B-20S	<10	<1
MW-5	<10	<1

*Sample results reported in milligrams per kilogram

TABLE 7

Piedmont Triad International Airport
Air Cargo Expansion
Greensboro, North Carolina
015-91-036

Sample Location	Parameter	Concentration
HA-1, HA-2	Chromium	4.3 mg/l
	Copper	22.6 mg/l
	Lead	13.3 mg/l
	Nickel	3.95 mg/l
	Zinc	27.5 mg/l
	Benzene	239 µg/kg
	Toluene	246 µg/kg

mg/l - milligrams per liter

µg/kg - micrograms per kilogram

TABLE 8

Piedmont Triad International Airport
Air Cargo Expansion
Greensboro, North Carolina
015-91-036

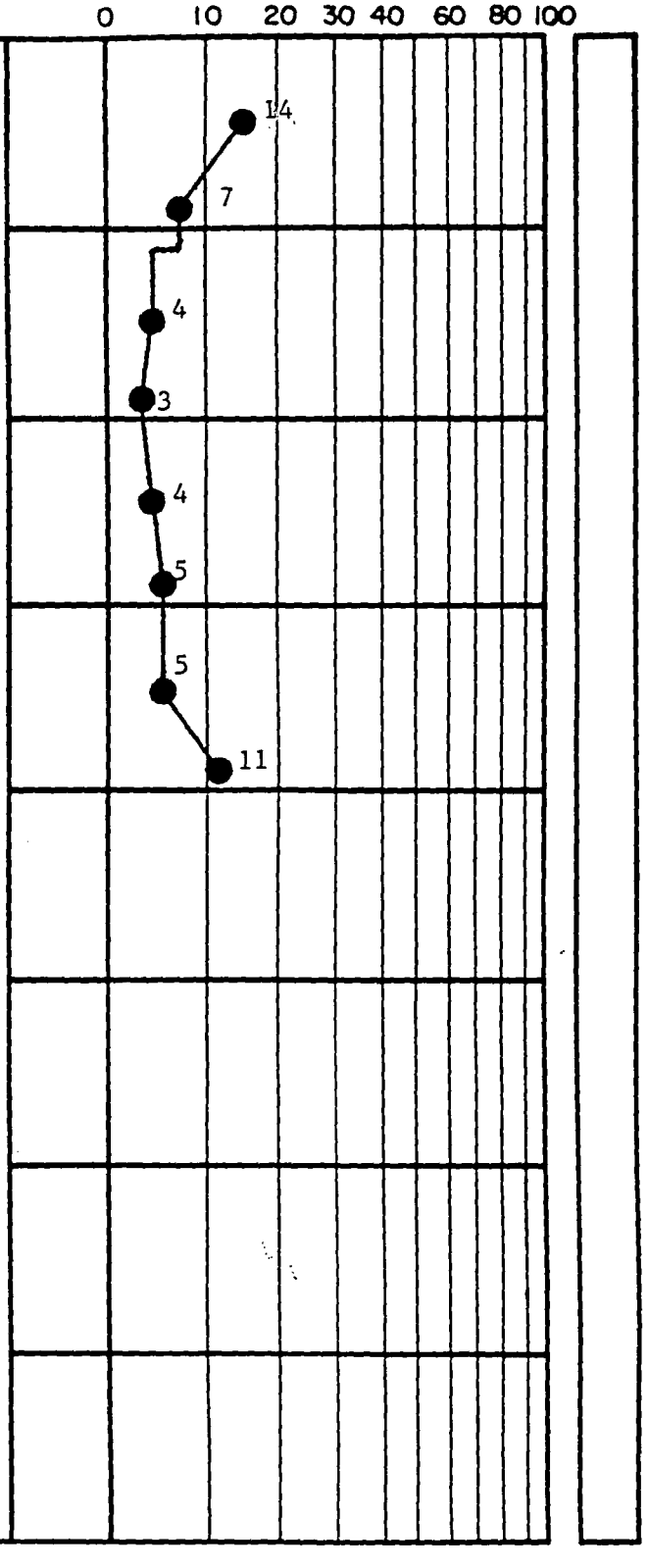
Parameter	MW-1	MW-2	MW-3	MW-4	MW-5	MW-4 Eq Blk	NCWQS
TPH - EPA 3550[1]	5.0	3.0	<1.0	1.0	1.0	BQL	
TPH - EPA 5050[1]	<0.1	<0.1	4.0	<0.1	<0.1	BQL	
Toluene[2]	BQL	BQL	988	289	248	247	1,000
Benzene[2]	BQL	BQL	356	233	BQL	BQL	1
1,2-Dichlorobenzene[2]	BQL	BQL	189	BQL	BQL	BQL	620
1,4-Dichlorobenzene[2]	BQL	BQL	576	BQL	BQL	BQL	1.8
Tetrachloroethene[2]	BQL	BQL	363	BQL	BQL	BQL	Detec-tion
Xylene[2]	BQL	BQL	286	BQL	BQL	BQL	400
Methylene Chloride[2]	BQL	BQL	BQL	BQL	610	578	5
Chloroform[2]	41	34	38	43	8	8	.19

NOTES

1 - Units are milligram per liter (mg/l)
2 - Units are micrograms per liter (µg/l)
TPH - Total Petroleum Hydrocarbons
MW - Monitoring Well
NCWQS - North Carolina Water Quality Standard

APPENDIX A

DEPTH FT.	DESCRIPTION	ELEV.
0.0	Stiff Firm Tan Brown and Orange Clayey Coarse to Fine Sandy SILT-Organics-Fill	
5.5	Soft Tan Brown and Orange Clayey Coarse to Fine Sandy SILT-Fill	
15.5	Firm to Stiff Grey Brown and Tan Clayey Medium to Fine Sandy SILT-Residual	
20.0	Boring Terminated	



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

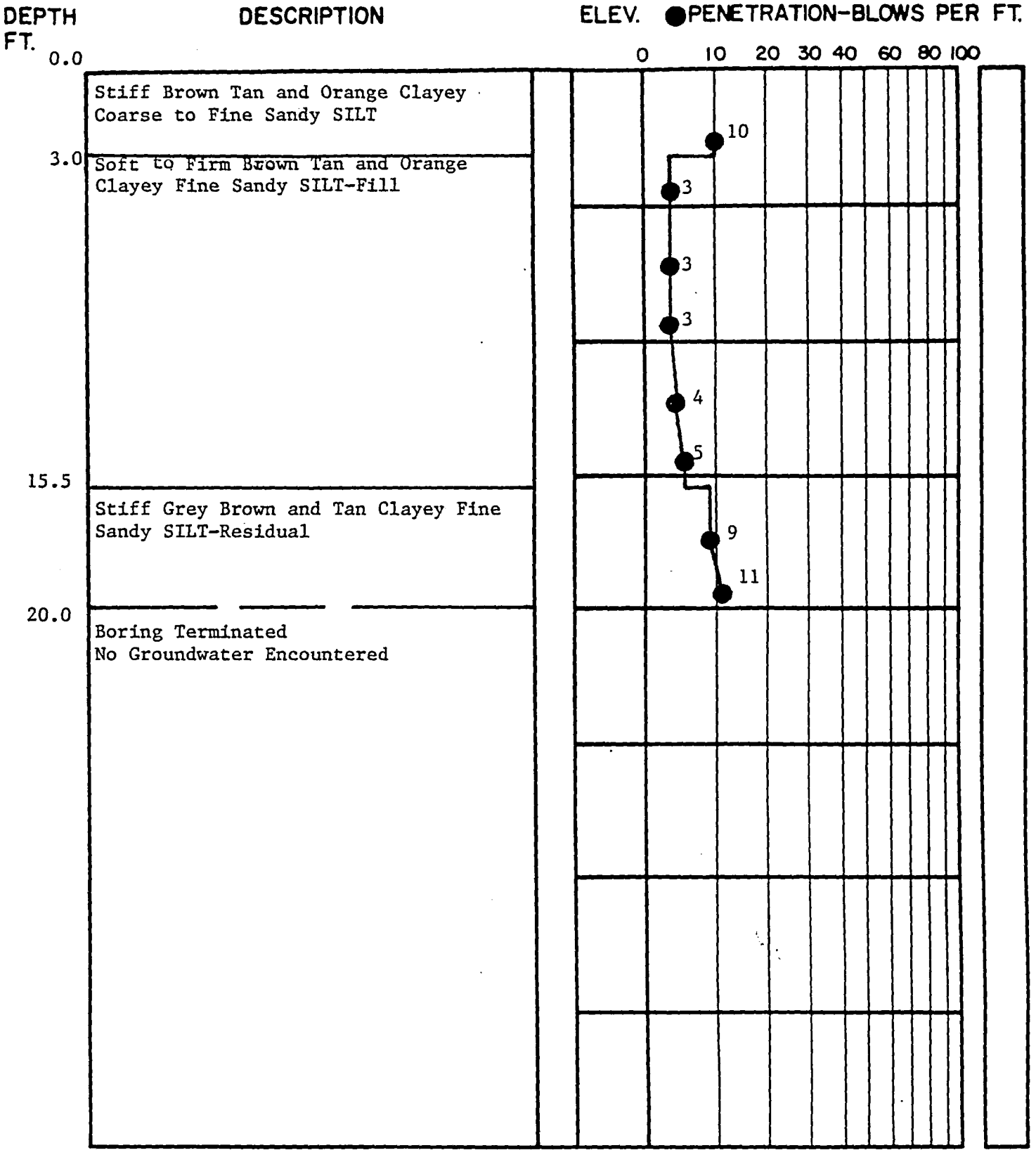
PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. STB-1
DATE DRILLED 04/10/91
JOB NO. 015-91-036

TRIGON



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

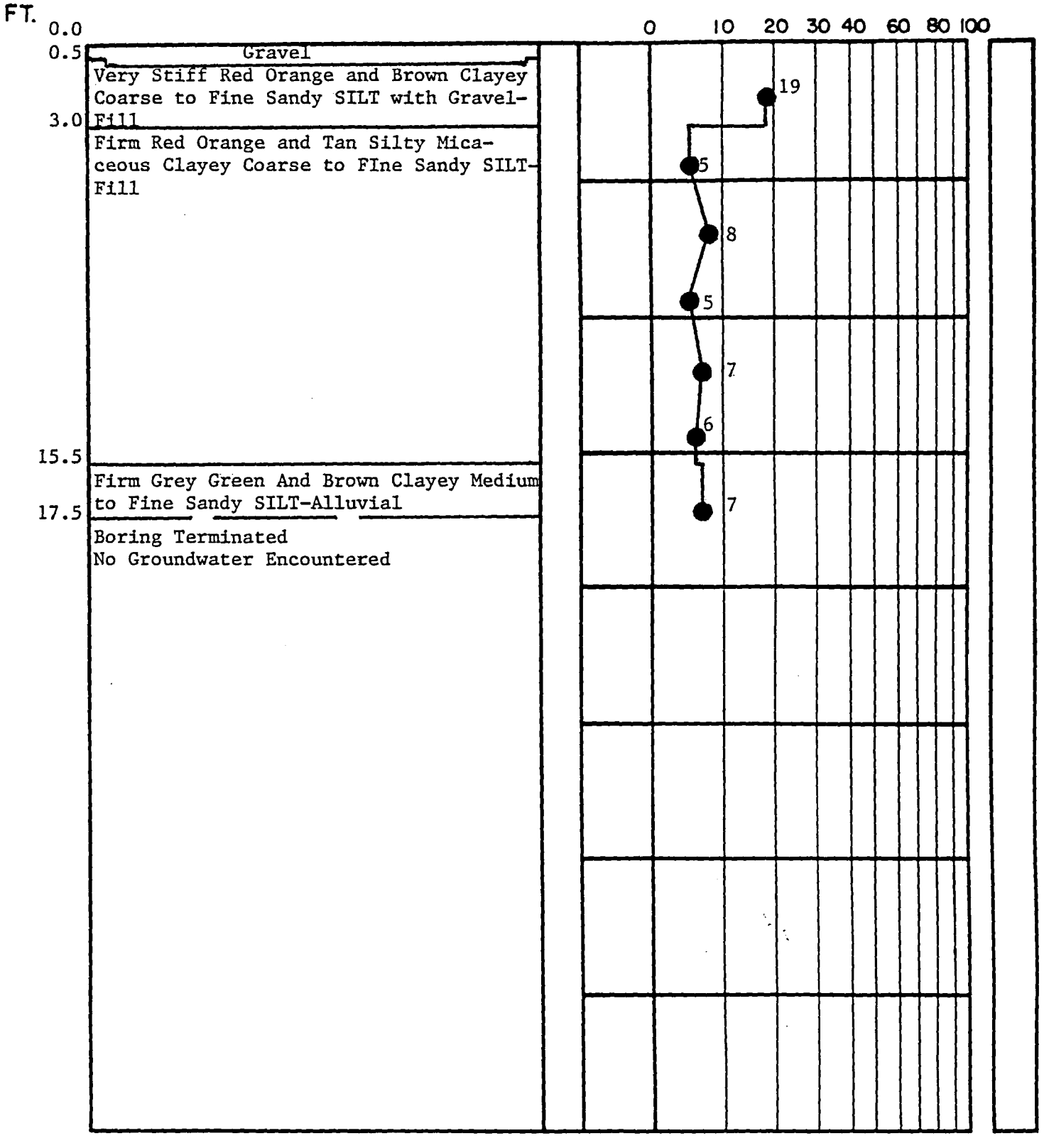
PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. STB-2
DATE DRILLED 04/10/91
JOB NO. 015-91-036

TRIGON



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

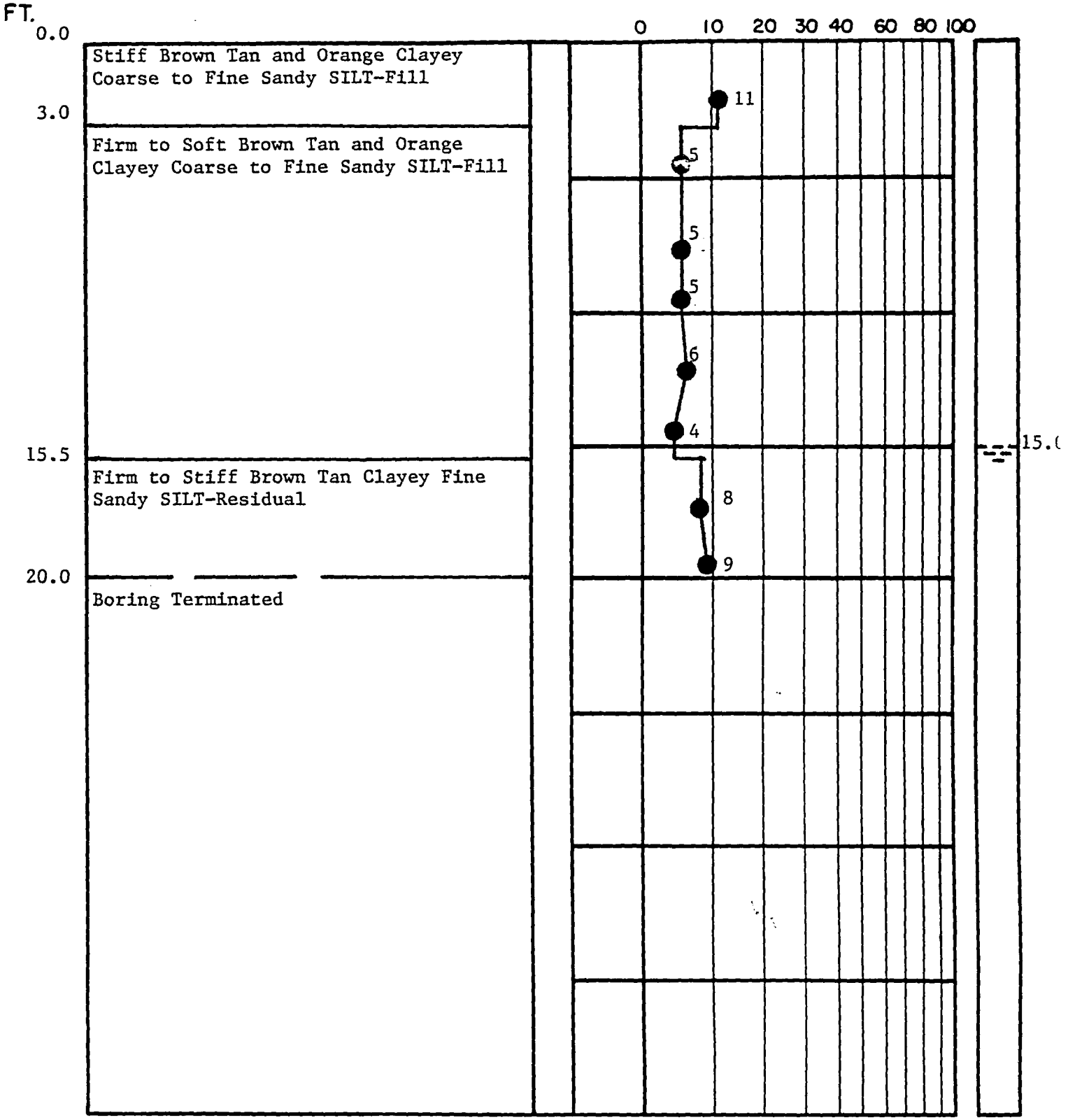
PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. B-3 W Extension
DATE DRILLED 04/09/91
JOB NO. 015-01-036

TRIGON



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

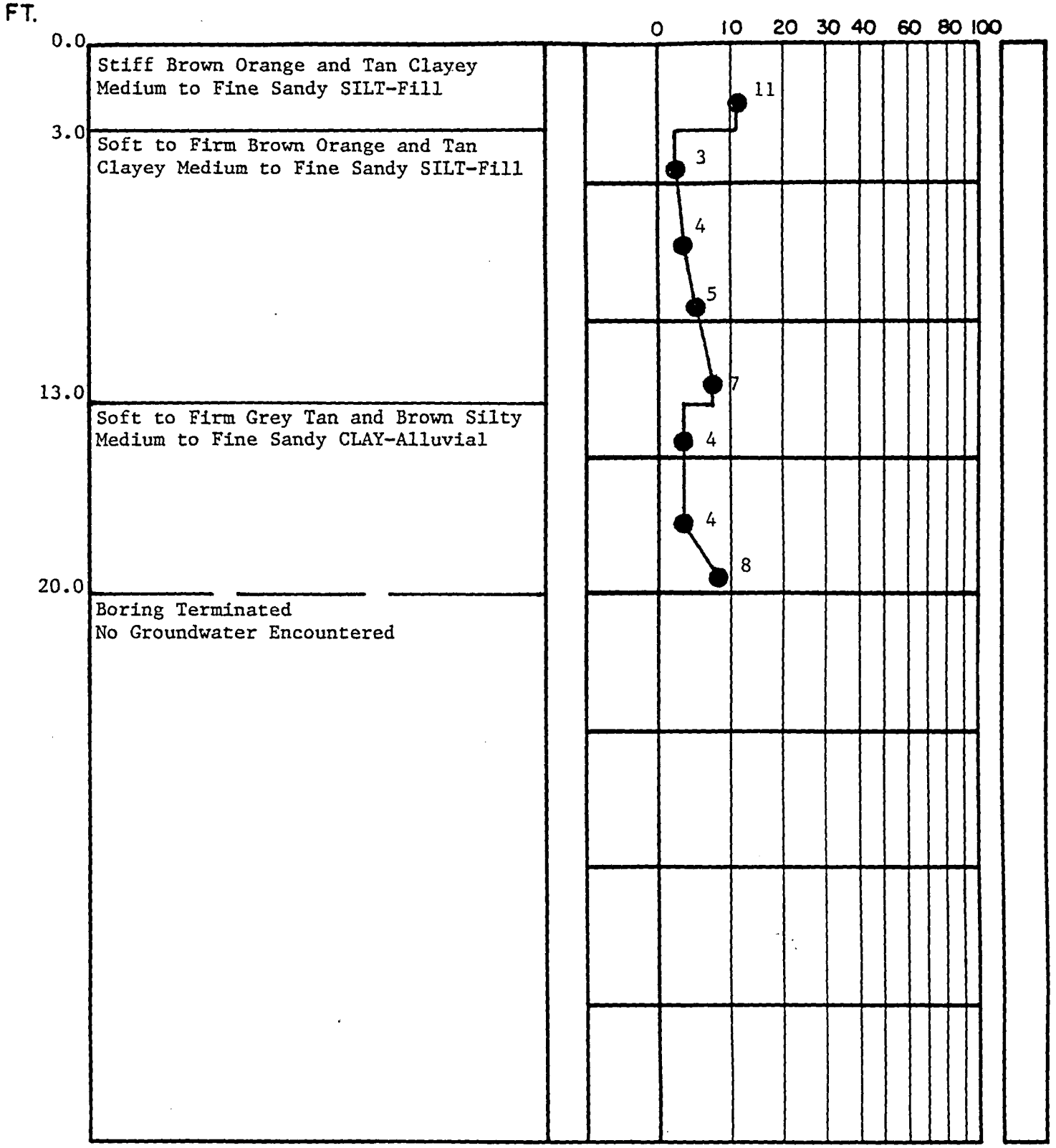
PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24 HR.
WATER TABLE-1 HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. STB-3
DATE DRILLED 04/11/91
JOB NO. 015-91-036

TRIGON



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

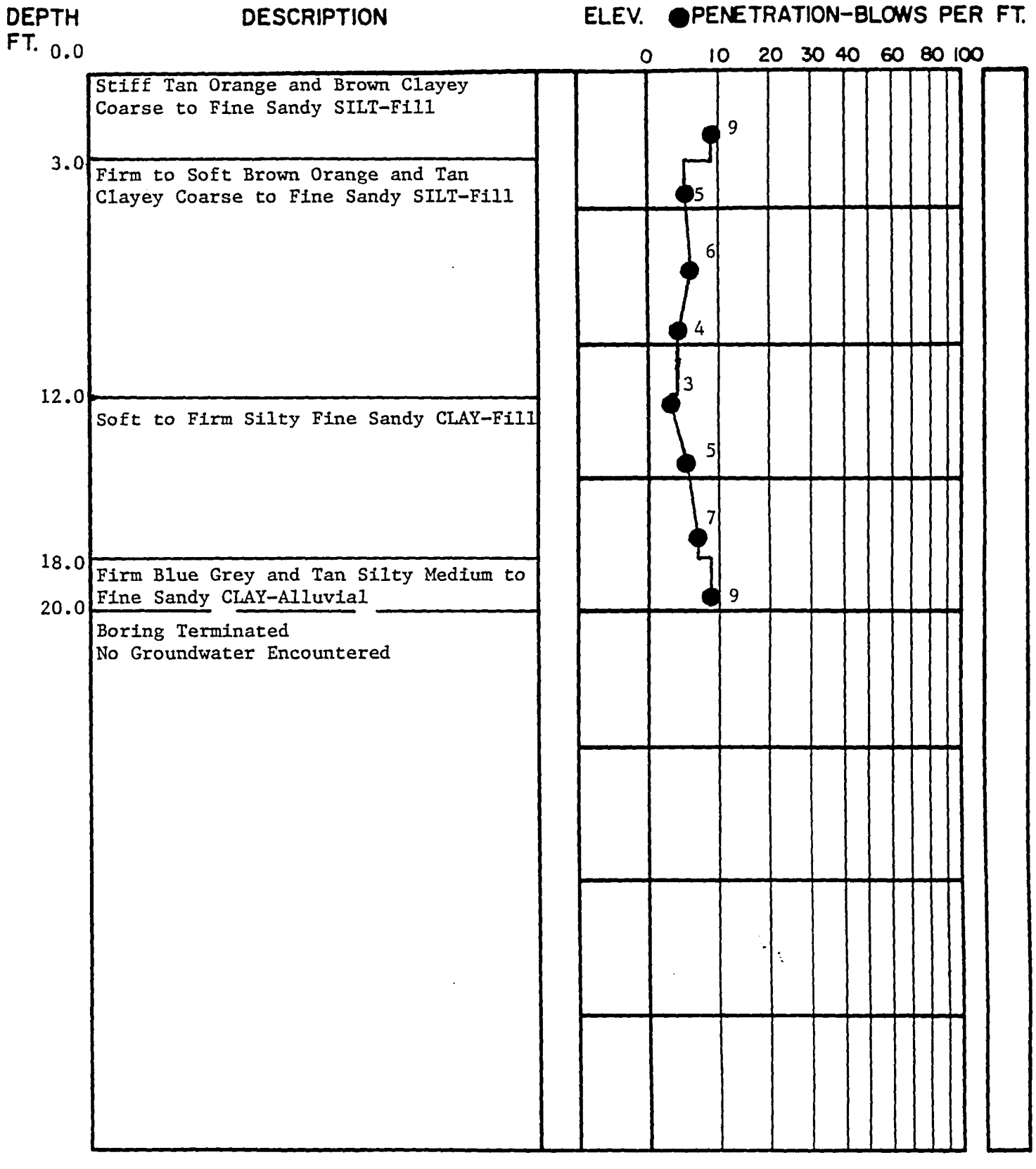
PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. B-3 N
DATE DRILLED 04/08/91
JOB NO. 013-91-036

TRIGON



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

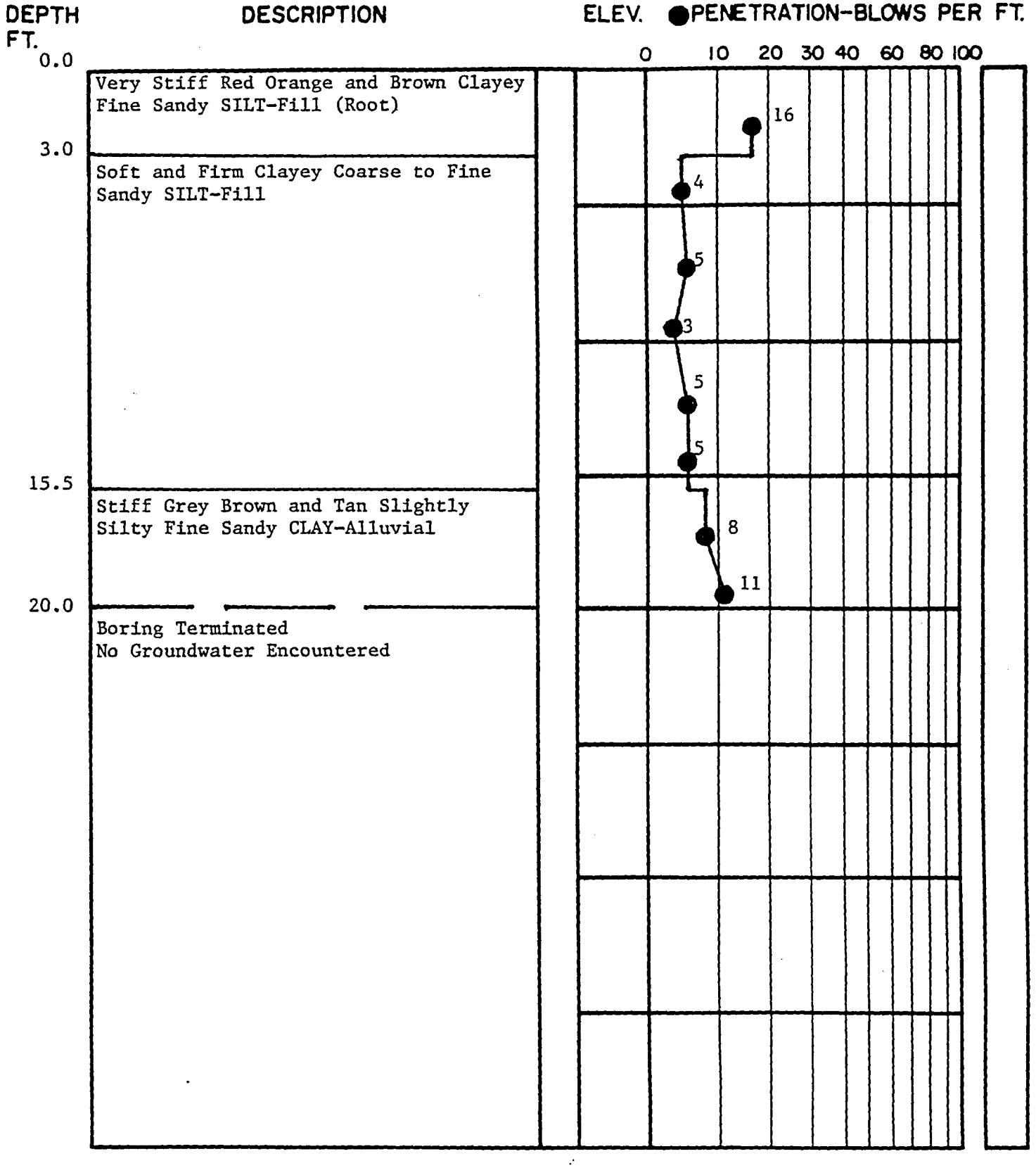
PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. B-3 S
DATE DRILLED 04/09/91
JOB NO. 015-91-036

TRIGON



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

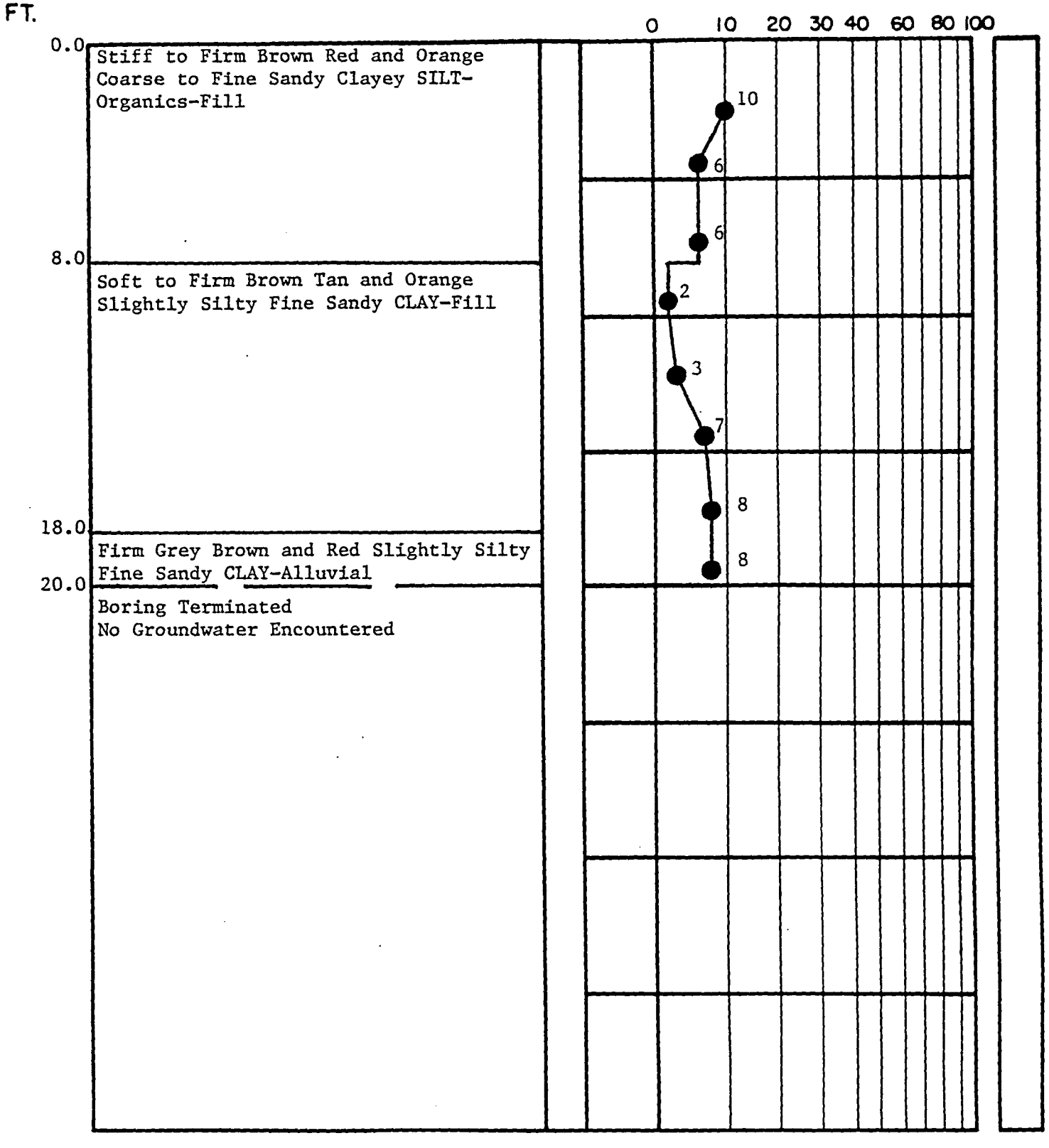
PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. B-3 E
DATE DRILLED 04/09/91
JOB NO. 015-91-036

TRIGON



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. B-3 W
DATE DRILLED 04/08/91
JOB NO. 015-91-036

TRIGON

DEPTH FT.	DESCRIPTION	ELEV. ●PENETRATION-BLOWS PER FT. 0 10 20 30 40 60 80 100
0.0	Stiff Tan Brown and Orange Slightly Micaceous Clayey Coarse to Fine Sandy SILT-Fill	10, 11
5.5	Stiff Tan Brown and Orange Micaceous Clayey Coarse to Fine Sandy SILT-Residual	12, 12
10.0	Boring Terminated NO Groundwater Encountered	

BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

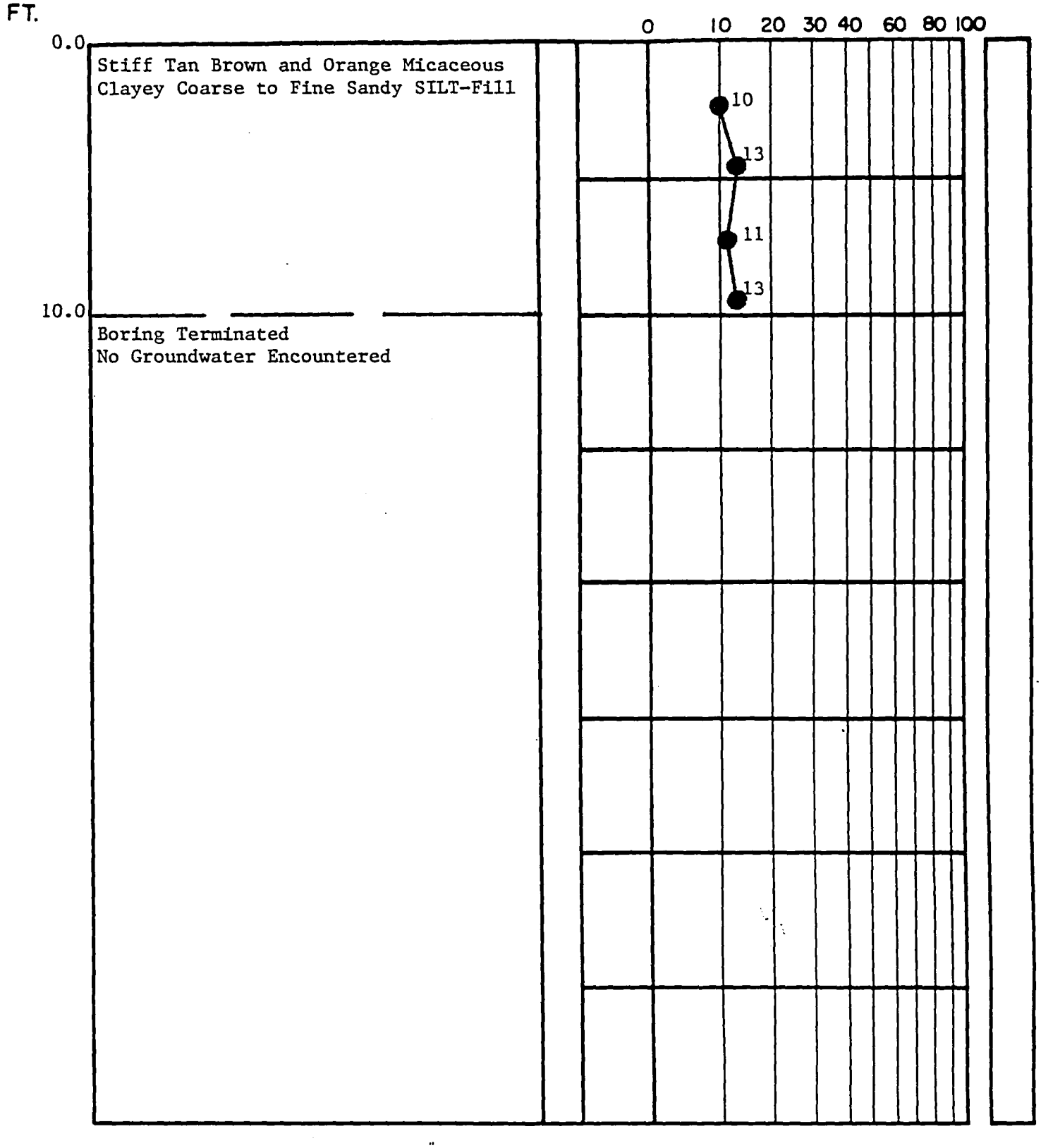
PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
◀ LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. B-20 N
DATE DRILLED 04/10/91
JOB NO. 015-91-036

TRIGON



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

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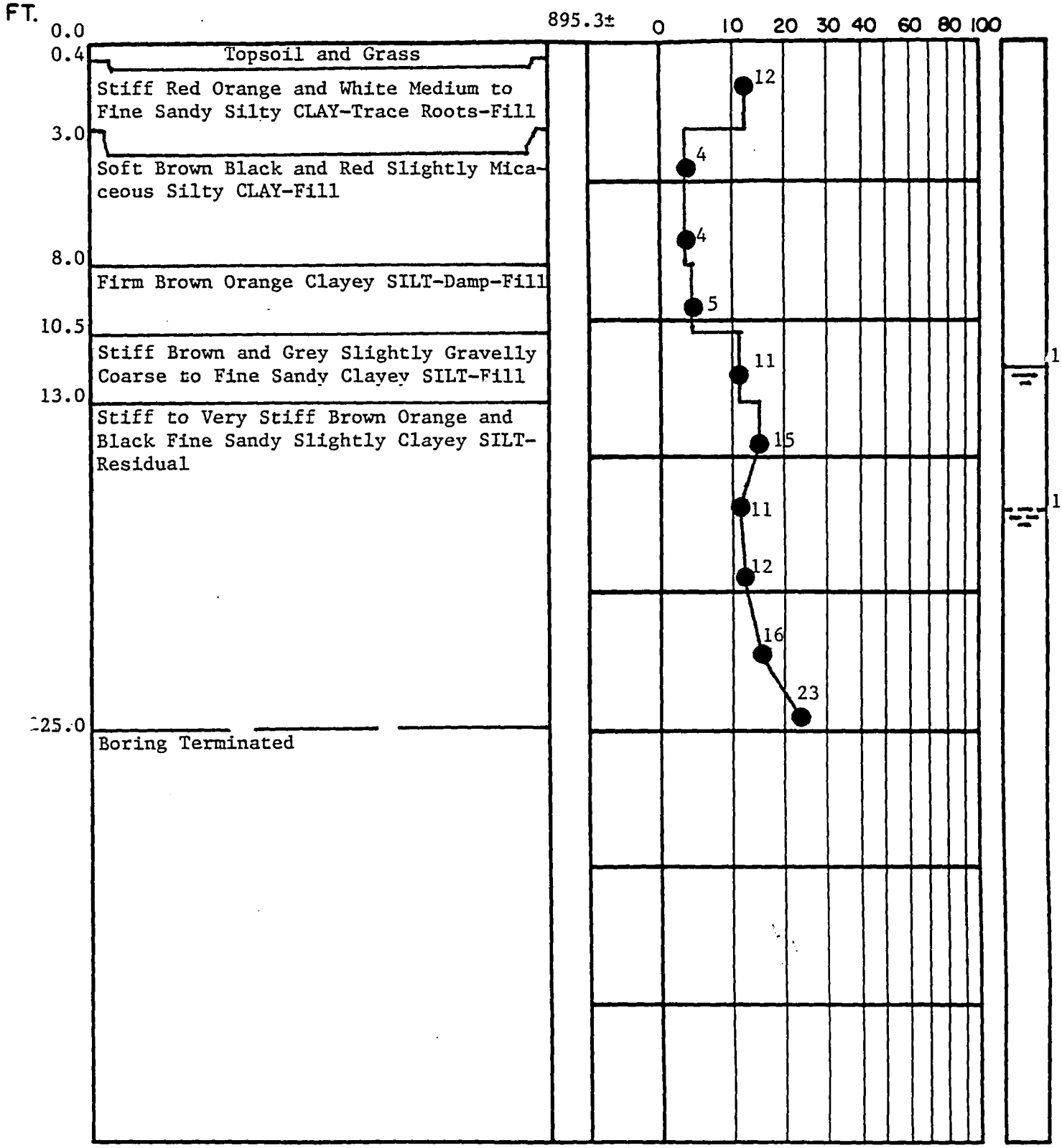
UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. B-20 S
DATE DRILLED 04/10/91
JOB NO. 015-91-036

TRIGON

APPENDIX B



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24 HR.
WATER TABLE-1 HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. MW-1
DATE DRILLED 04/09/91
JOB NO. 015-91-036

TRIGON

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH,N.C. 27611, PHONE (919) 733-5083

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

1. DRILLING CONTRACTOR TRIGON ENGINEERING CONSULTANTS, INC.
DRILLER REGISTRATION NUMBER 813
STATE WELL CONSTRUCTION PERMIT NUMBER: 40-0949-WM-0336

WELL LOCATION: (Show sketch of the location below)
Nearest Town: Greensboro, NC
County: Guilford County
(Road, Community, or Subdivision and Lot No.)

2. OWNER Piedmont Triad Airport Authority
ADDRESS P.O. Box 35005
(Street or Route No.)
Greensboro, North Carolina 17425
City or Town State Zip Code

3. DATE DRILLED 04/09/91 USE OF WELL Monitoring
4. TOTAL DEPTH 24.5 CUTTINGS COLLECTED [X] Yes [ ] No
5. DOES WELL REPLACE EXISTING WELL? [ ] Yes [X] No
6. STATIC WATER LEVEL: 14.0 FT. [ ] above [X] below TOP OF CASING.
TOP OF CASING IS 2.3 FT. ABOVE LAND SURFACE
7. YIELD (gpm): N/A METHOD OF TEST N/A
8. WATER ZONES (depth): 11.7
9. CHLORINATION: Type NA Amount NA

10. CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
From	0.0	9.5 Ft.	2	SCH40	PVC
From		To Ft.			
From		To Ft.			

11. GROUT:

	Depth From	Depth To	Material	Method
From	0.0	5.5 Ft.	Portland	Slue
From		To Ft.		

12. SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
From	9.5	24.5 Ft.	2 in.	0.010 in.	PVC
From		To Ft.	in.	in.	
From		To Ft.	in.	in.	

13. GRAVEL PACK:

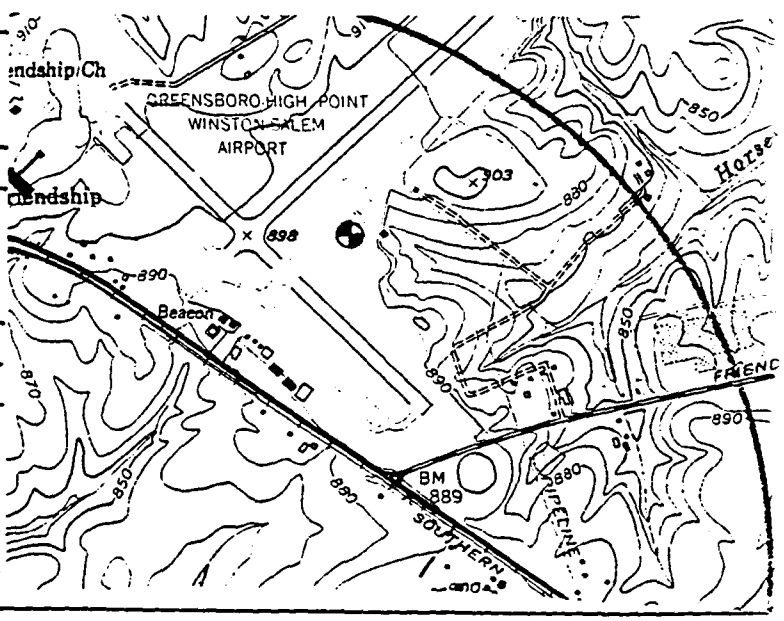
	Depth From	Depth To	Size	Material
From	7.5	24.5 Ft.	Fine Filter	Sand
From		To Ft.		

14. REMARKS: Bentonite Seal From 5.5 to 7.5'.

Depth From	Depth To	DRILLING LOG Formation Description
MW-1		
0.0	0.4	Grass and Topsoil
0.4	3.0	Stiff Red Orange and White Medium to Fine Sandy Silty CLAY-Trace Roots-Fill
3.0	8.0	Soft Brown Black and Red Slightly Micaceous Silty CLAY Fill.
8.0	10.5	Firm Brown Orange Clayey SILT Damp-Fill
10.5	13.0	Stiff Brown and Grey Slightly Gravelly Coarse to Fine Sandy Clayey SILT-Fill
13.0	25.0	Stiff to Very Stiff Brown

If additional space is needed use back of form. (Con't)

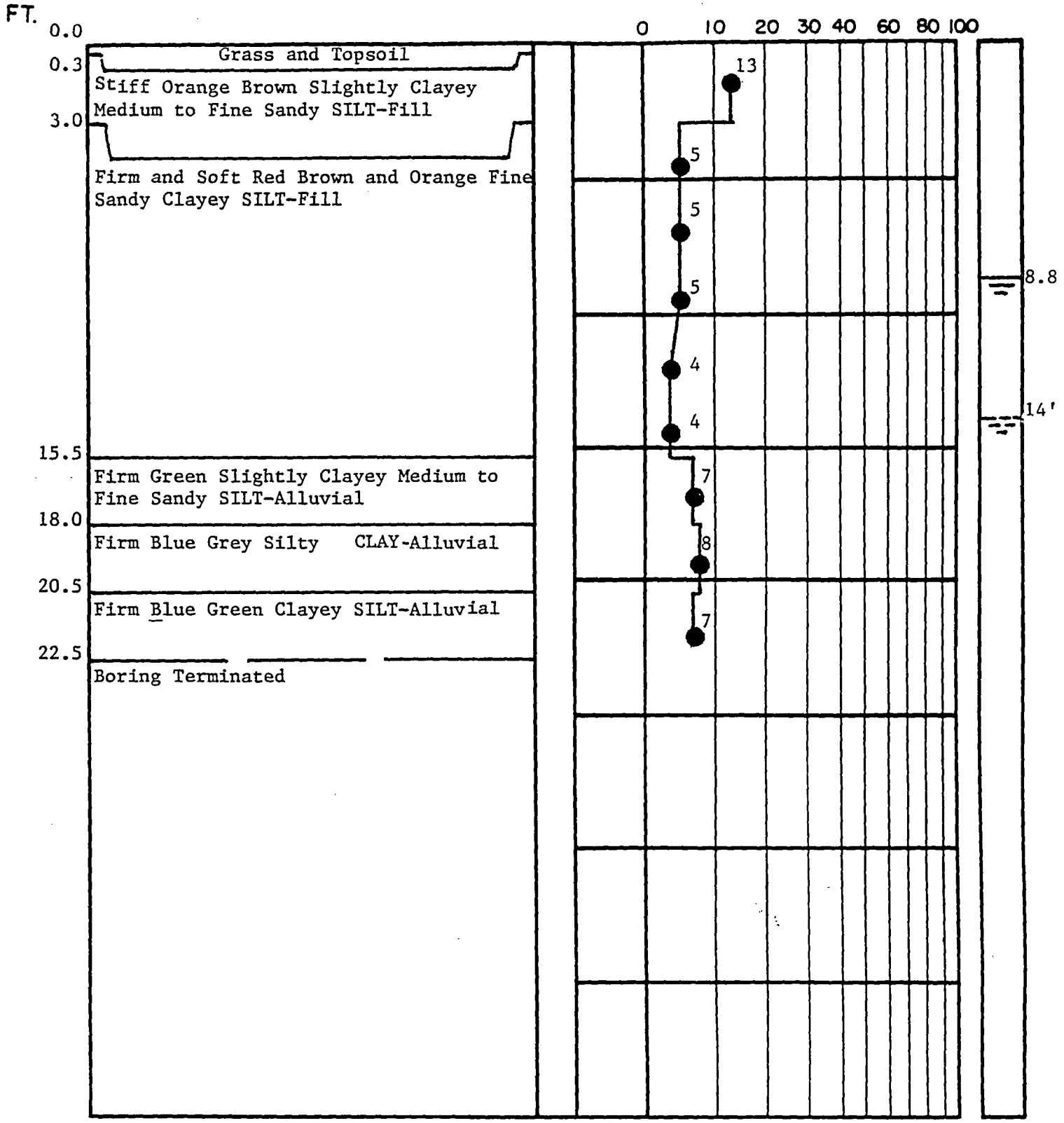
LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C. WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

J. Scott Tease 05/02/91
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 11/84
Submit original to Division of Environmental Management and copy to well owner.



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. MW-2
DATE DRILLED 04/09/91
JOB NO. 015-91-036

TRIGON

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH,N.C. 27611, PHONE (919) 733-5083

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

1. DRILLING CONTRACTOR TRIGON ENGINEERING CONSULTANTS, INC.
DRILLER REGISTRATION NUMBER 813
STATE WELL CONSTRUCTION PERMIT NUMBER: 40-0949-WM-0336

WELL LOCATION: (Show sketch of the location below)
Nearest Town: Greensboro
County: Guilford County
(Road, Community, or Subdivision and Lot No.)

2. OWNER Piedmont Triad Airport Authority
ADDRESS P.O. Box 35005
Greensboro, NC (Street or Route No.) 27425
City or Town State Zip Code

3. DATE DRILLED 04/09/91 USE OF WELL Monitoring
4. TOTAL DEPTH 23' CUTTINGS COLLECTED ☐ Yes ☒ No
5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No
6. STATIC WATER LEVEL: 11.3' FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 2.5 FT. ABOVE LAND SURFACE
7. YIELD (gpm): N/A METHOD OF TEST N/A
8. WATER ZONES (depth): 8.8'
9. CHLORINATION: Type N/A Amount N/A
10. CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
0	8 Ft.	2	SCH40	PVC
	Ft.			
	Ft.			

11. GROUT:

Depth From	To	Material	Method
0	4 Ft.	Portland	Slue
	Ft.		

12. SCREEN:

Depth From	To	Diameter	Slot Size	Material
8	23 Ft.	2 in.	0.010 in.	PVC
	Ft.	in.	in.	
	Ft.	in.	in.	

13. GRAVEL PACK:

Depth From	To	Size	Material
6	23.0 Ft.	Fine Filter	Sand
	Ft.		

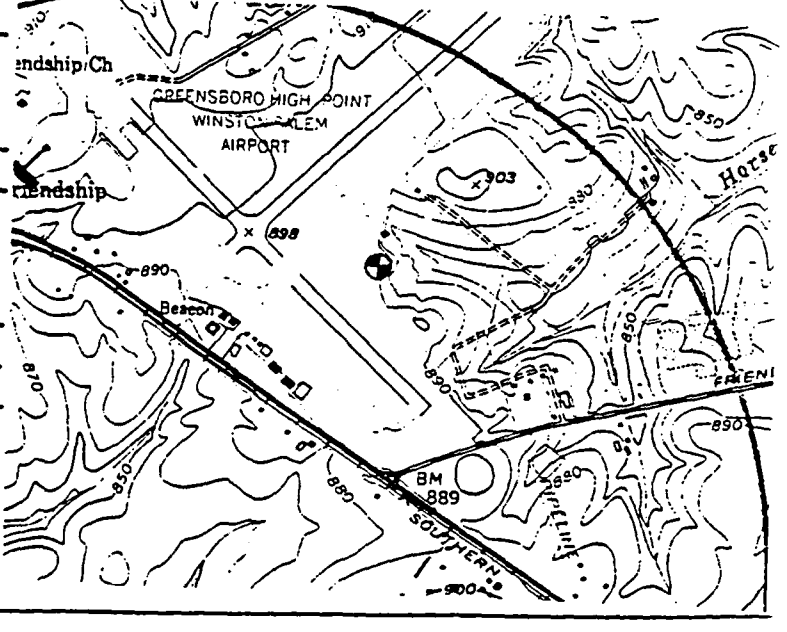
14. REMARKS. Bentonite Seal From 4.0' tp 6.0'

MW-2

Depth From	To	DRILLING LOG Formation Description
0.0	0.3	Grass and Topsoil
0.3	3.0	Stiff Orange Brown Slightly Clayey Medium to Fine Sandy SILT-Fill
3.0	15.5	Firm and Soft Red Brown and Orange Fine Sandy Clayey SILT-Fill
15.5	18.0	Firm Green Slightly Clayey Medium to Fine Sandy SILT-Alluvial
18.0	20.5	Firm Blue Grey Silty CLAY-Alluvial
20.5	22.5	Firm Blue Grey Clayey SILT-Alluvia

If additional space is needed use back of form.

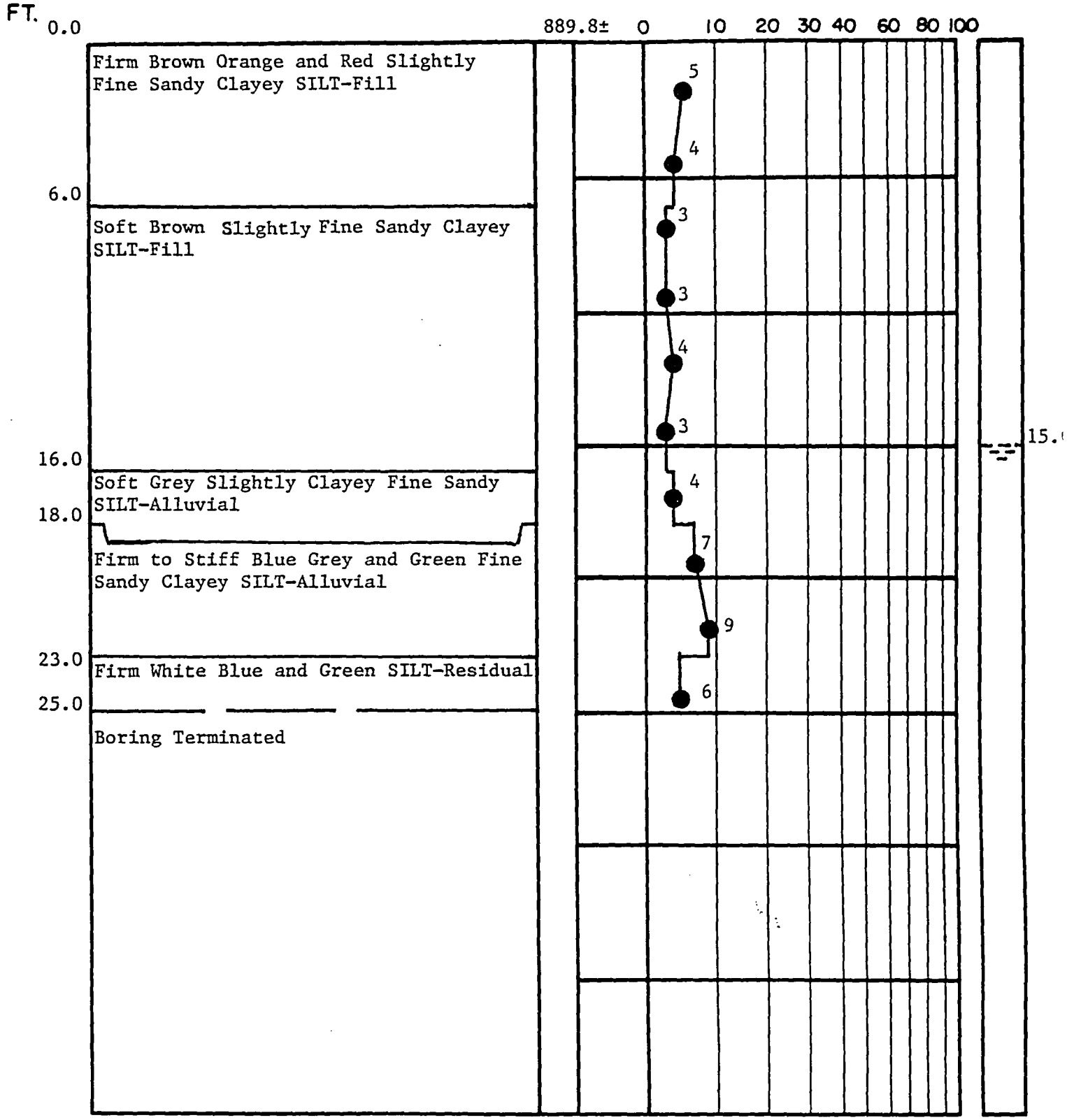
LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

J. Scott Frank 05/02/91
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 11/84
Submit original to Division of Environmental Management and copy to well owner.



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
◀ LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. MW-3
DATE DRILLED 04/10/91
JOB NO. 015-91-036

TRIGON

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH,N.C. 27611, PHONE (919) 733-5083

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

1. DRILLING CONTRACTOR: TRIGON ENGINEERING CONSULTANTS, INC.
DRILLER REGISTRATION NUMBER: 813
STATE WELL CONSTRUCTION PERMIT NUMBER: 40-0949-WM-0336

WELL LOCATION: (Show sketch of the location below)
Nearest Town: Greensboro
County: Guilford County
(Road, Community, or Subdivision and Lot No.)

2. OWNER: Piedmont Triad Airport Authority
ADDRESS: P.O. Box 35005
Greensboro, NC (Street or Route No.) 27425
City or Town State Zip Code

3. DATE DRILLED: 04/10/91 USE OF WELL: Monitoring

4. TOTAL DEPTH: 24.5 CUTTINGS COLLECTED: [X] Yes [ ] No

5. DOES WELL REPLACE EXISTING WELL? [ ] Yes [X] No

6. STATIC WATER LEVEL: 14.0 FT. [ ] above [X] below TOP OF CASING.
TOP OF CASING IS 2.3 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST: N/A

8. WATER ZONES (depth): 11.7'

9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
	0.0	9.5	2	SCH40	PVC

11. GROUT:

	Depth From	Depth To	Material	Method
	0.0	5.5	Portland	Slue

12. SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
	9.5	24.5	2 in.	0.010 in.	PVC
			in.	in.	
			in.	in.	

13. GRAVEL PACK:

	Depth From	Depth To	Size	Material
	7.5	24.5	Fine Filer	Sand

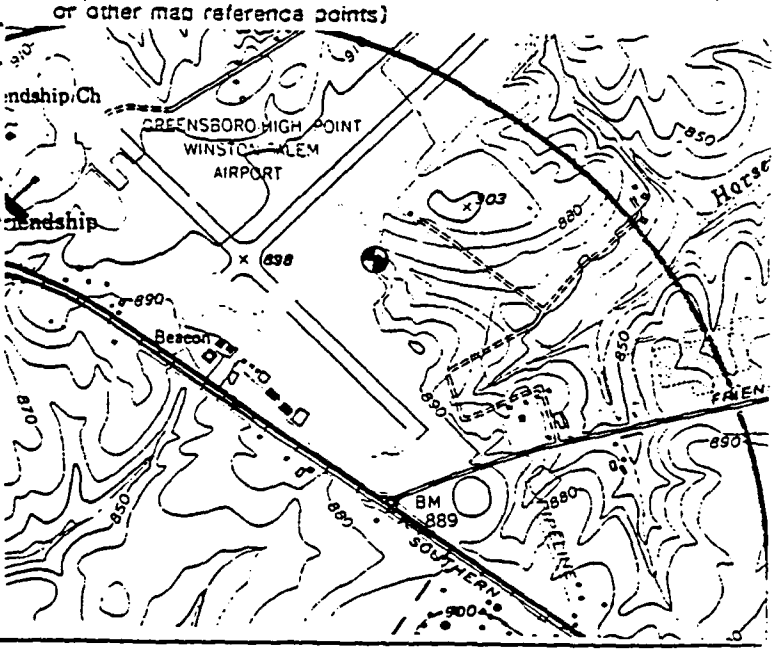
14. REMARKS: Bentonite Seal From 7.5'to 9.5'

MW-3

Depth From	Depth To	DRILLING LOG Formation Description
0.0	6.0	Firm Brown Orange and Red Slighlty Fine Sandy Clayey SIL Fill
6.0	16.0	Soft Brown Slightly Fine Sandy Clayey SILT-Fill
16.0	18.0	Soft Grey Slightly Clayey Fine Sandy SILT-Alluvial
18.0	23.0	Firm to Stiff Blue Grey and Green Fine Sandy Clayey SILT-Alluvial
23.0	25.0	Firm White Blue and Green SILT Residual

If additional space is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)

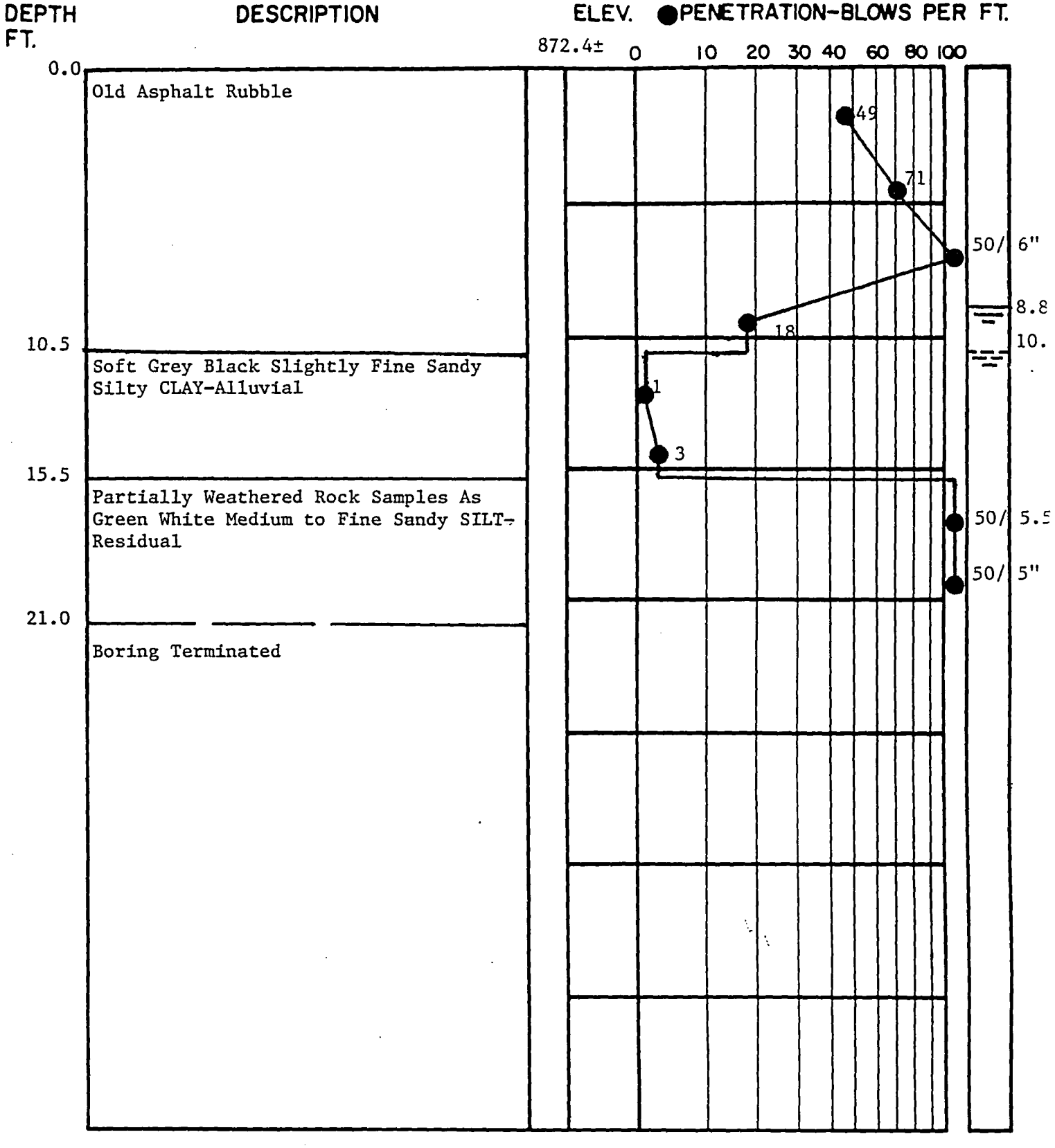


I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

J. Scott Farrell 05/02/91
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 11/84

Submit original to Division of Environmental Management and copy to well owner.



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50 % ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. MW-4
DATE DRILLED 04/10/91
JOB NO. 015/91/036

TRIGON

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH,N.C. 27611, PHONE (919) 733-5083

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR TRIGON ENGINEERING CONSULTANTS, INC.
DRILLER REGISTRATION NUMBER 813
STATE WELL CONSTRUCTION PERMIT NUMBER: 40-0949-WM-0336

WELL LOCATION: (Show sketch of the location below)
Nearest Town: Greensboro
County: Guilford County
(Road, Community, or Subdivision and Lot No.)

2. OWNER Piedmont Triad Airport Authority
ADDRESS P.O. Box 35005
Greensboro, NC (Street or Route No.) 27425
City or Town State Zip Code

3. DATE DRILLED 04/10/91 USE OF WELL Monitoring
4. TOTAL DEPTH 20.5 CUTTINGS COLLECTED ☒ Yes ☐ No
5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No
6. STATIC WATER LEVEL: 10.9 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 2.1 FT. ABOVE LAND SURFACE.
7. YIELD (gpm): N/A METHOD OF TEST N/A
8. WATER ZONES (depth): 8.8
9. CHLORINATION: Type N/A Amount N/A
10. CASING:

Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
0	5.5 Ft.	2.0	SCH40	PVC
From ___	To ___ Ft.			
From ___	To ___ Ft.			

11. GROUT:

Depth From	Depth To	Material	Method
0	2.5 Ft.	Portland	Slue
From ___	To ___ Ft.		

12. SCREEN:

Depth From	Depth To	Diameter	Slot Size	Material
5.5	20.5 Ft.	2.0 in.	0.010 in.	PVC
From ___	To ___ Ft.	___ in.	___ in.	
From ___	To ___ Ft.	___ in.	___ in.	

13. GRAVEL PACK:

Depth From	Depth To	Size	Material
3.5	5.5 Ft.	Fine Filter	Sand
From ___	To ___ Ft.		

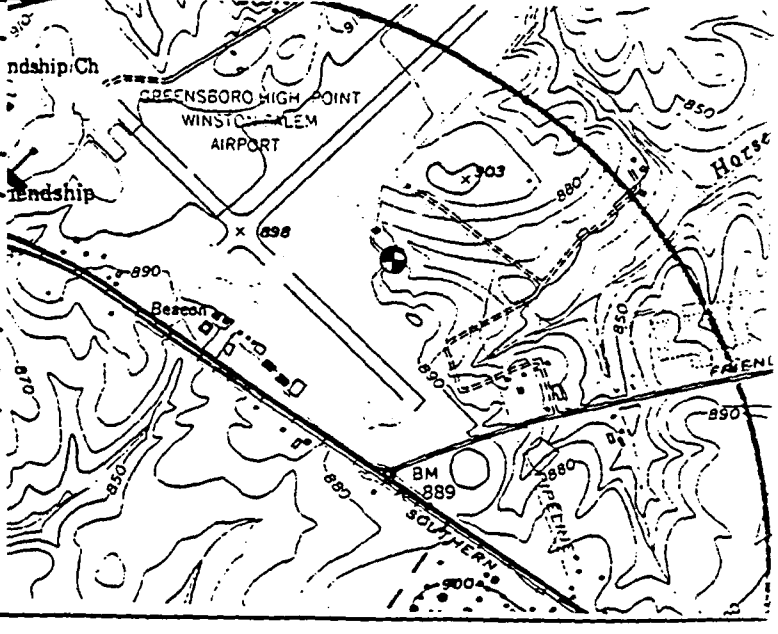
14. REMARKS: Bentonite Seal From 2.5' to 3.5'

MW-4

Depth From	Depth To	DRILLING LOG Formation Description
0.0	10.5	Asphalt Rubble
10.5	15.5	Soft Grey Black Slightly Fine Sandy Silty CLAY-Alluvia
15.5	21.0	Partially Weathered Rock Samples As Green White Medium to Fine Sandy SILT-Residual

If additional space is needed use back of form.

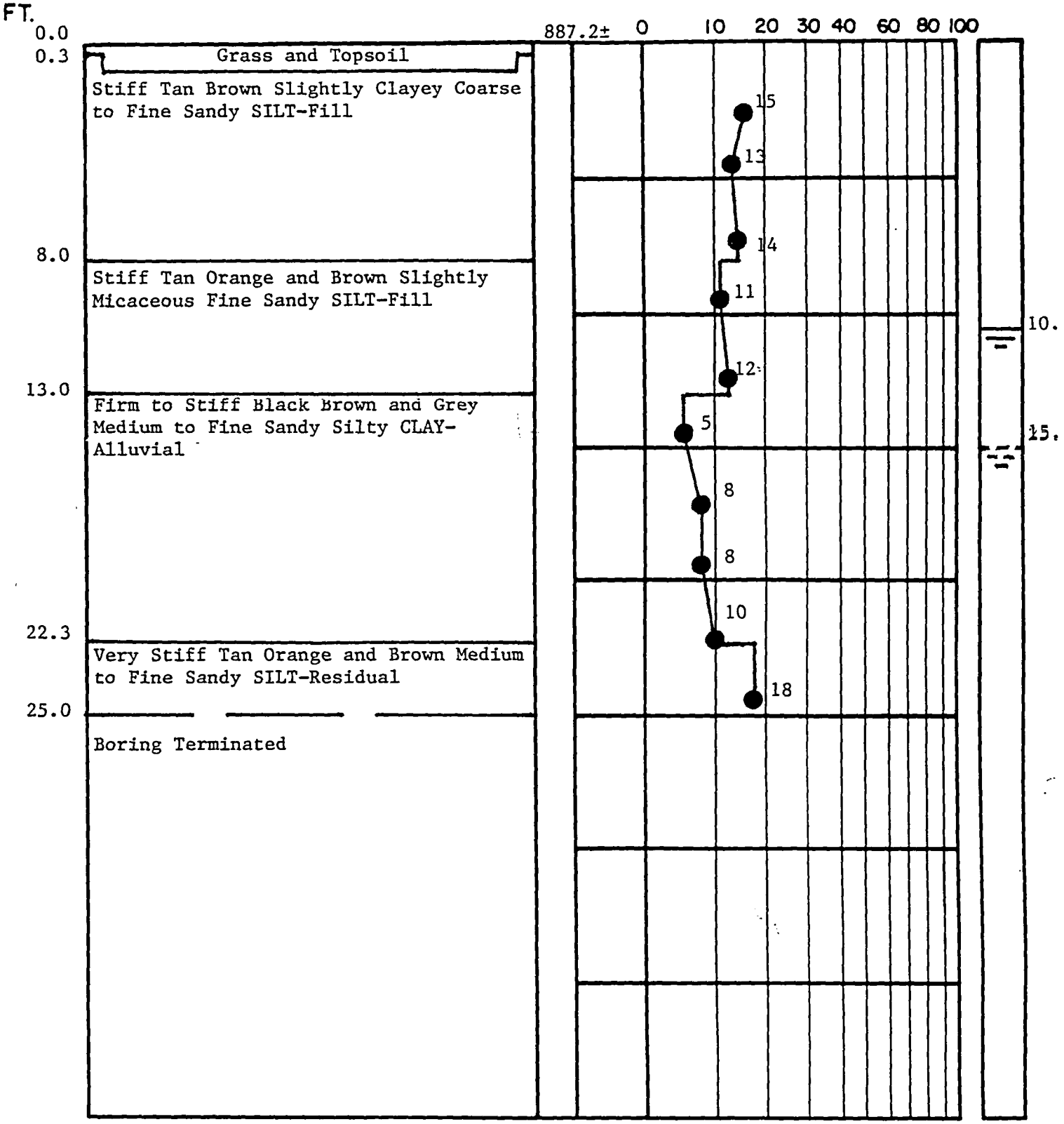
LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

J. Scott Pearce — 05/02/91
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 11/84
Submit original to Division of Environmental Management and copy to well owner.



BORING AND SAMPLING MEETS ASTM D-1586
CORE DRILLING MEETS ASTM D-2113

PENETRATION IS THE NUMBER OF BLOWS OF 140 LB. HAMMER FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

UNDISTURBED SAMPLE
50% ROCK CORE RECOVERY
LOSS OF DRILLING WATER
WATER TABLE-24HR.
WATER TABLE-1HR.
CAVE-IN DEPTH

TEST BORING RECORD

BORING NO. TW-5
DATE DRILLED 04/11/91
JOB NO. 015-91-036

TRIGON

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH,N.C. 27611, PHONE (919) 733-5083

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

1. DRILLING CONTRACTOR TRIGON ENGINEERING CONSULTANTS, INC.
DRILLER REGISTRATION NUMBER 813
STATE WELL CONSTRUCTION PERMIT NUMBER: 40-0949-WM-0336

WELL LOCATION: (Show sketch of the location below)
Nearest Town: Greensboro County: Guilford County
(Road, Community, or Subdivision and Lot No.)

2. OWNER Piedmont Triad Airport Authority
ADDRESS P.O. Box 35005
Greensboro, NC (Street or Route No.) 27425
City or Town State Zip Code

3. DATE DRILLED 04/11/91 USE OF WELL Monitoring
4. TOTAL DEPTH 25.0 CUTTINGS COLLECTED ☐ Yes ☒ No
5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No
6. STATIC WATER LEVEL: 12.7 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 2.2 FT. ABOVE LAND SURFACE.
7. YIELD (gpm): N/A METHOD OF TEST N/A
8. WATER ZONES (depth): 10.5
9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
	0	10.0 Ft.	2	SCH40	PVC
		Ft.			
		Ft.			

11. GROUT:

	Depth From	To	Material	Method
	0	6.0 Ft.	Portland	Slue
		Ft.		

12. SCREEN:

	Depth From	To	Diameter	Slot Size	Material
	10.0	25.0 Ft.	2 in.	0.01 in.	PVC
		Ft.	in.	in.	
		Ft.	in.	in.	

13. GRAVEL PACK:

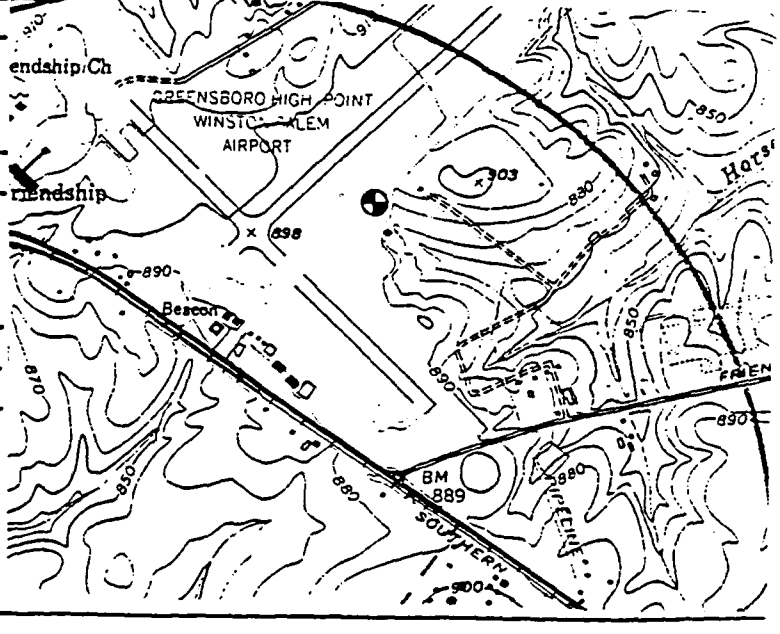
	Depth From	To	Size	Material
	8.0	10.0 Ft.	Fine Filter	Sand
		Ft.		

14. REMARKS: Bentonite Seal From 6.0' to 8.0'

Depth From	To	DRILLING LOG Formation Description
MW-5		
0.0	0.3	Grass and Topsoil
0.3	8.0	Stiff Tan Brown Slightly Claye Coarse to Fine Sandy SILT-Fill
8.0	13.0	Stiff Tan Orange and Brown Slightly Micaceous Fine Sandy SILT-Fill
13.0	22.3	Firm to Stiff Black Brown and Grey Medium to Fine Sandy Silt CLAY-Alluvial
22.3	25.0	Very Stiff Tan Orange and Brow Medium to Fine Sandy SILT- Residual

If additional space is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



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J. Scott Feaver 05/02/91
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 11/84
Submit original to Division of Environmental Management and copy to well owner.

APPENDIX C

AquaChem
ENVIRONMENTAL LABORATORIES, INC.
11104 DOWNS ROAD
PINEVILLE, NC 28134
704/ 588-5076
FAX 704/ 588-2454

NC Certification Number: 305
SC Certification Number: 99032

Date of Report: April 26, 1991
Date Received: April 10, 1991

Approved By: James C. Taylor
General Manager

Client: Trigon Engineering
P.O. Box 18846
Greensboro, North Carolina 27419-8846

Contact: Scott Pearce

Customer Number: 2021

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
826A1	B-3S	Arsenic	<0.005	mg/l
		Selenium	<0.005	mg/l
		Cadmium	<0.01	mg/l
		Chromium	<0.05	mg/l
		Lead	<0.05	mg/l
		Mercury	<0.001	mg/l
		Silver	<0.01	mg/l
		Barium	<0.50	mg/l
826A2	B-3W	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	9	mg/kg
826A3	B-3N	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
826A4	B-3S	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
826A5	B-3E	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
826A6	B-3W EX	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
826A7	MW-2	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
826A8	HA-1, HA-2	Cyanide, Total	<0.01	mg/l
		Phenol	<0.25	mg/l
		Arsenic	<0.005	mg/l
		Selenium	<0.005	mg/l
		Cadmium	<0.01	mg/l
		Chromium	4.30	mg/l
		Copper	22.6	mg/l
		Lead	13.3	mg/l
		Nickel	3.95	mg/l
		Zinc	27.5	mg/l
		Mercury	<0.001	mg/l
		Silver	<0.01	mg/l
		Antimony	<0.5	mg/l

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
826A8	HA-1,HA-2	Beryllium	<0.01	mg/l
		Thallium	<0.5	mg/l
		4-NITROPHENOL	<100	ug/kg
		PENTACHLOROPHENOL	<100	ug/kg
		4,6-DINITRO-O-CRESOL	<100	ug/kg
		2,4-DINITROPHENOL	<100	ug/kg
		4-CHLORO-3-METHYPHENOL	<100	ug/kg
		2,4,6-TRICHLOROPHENOL	<100	ug/kg
		2,4-DICHLOROPHENOL	<100	ug/kg
		2,4-DIMETHYLPHENOL	<100	ug/kg
		2-NITROPHENOL	<100	ug/kg
		2-CHLOROPHENOL	<100	ug/kg
		N-NITROSODIMTHYLAMINE	<100	ug/kg
		BIS(2-CHLOROETHYL)ETHER	<100	ug/kg
		N-NITROSO-DI-N-PROPYLAMINE	<100	ug/Kg
		NITROBENZENE	<100	ug/kg
		HEXACHLOROBUTADIENE	<100	ug/kg
		1,2,4-TRICHLOROBENZENE	<100	ug/kg
		ISOPHORONE	<100	ug/kg
		NAPHTHALENE	<100	ug/kg
		BIS(2-CHLOROETHOXY) METHANE	<100	ug/kg
		HEXACHLOROCYCLOPENTADIENE	<100	ug/kg
		2-CHLORONAPHTHALENE	<100	ug/kg
		ACENAPHTHYLENE	<100	ug/kg
		ACENAPHTHENE	<100	ug/kg
		DIMETHYL PHTHALATE	<100	ug/kg
		2,6-DINITROTOLUENE	<100	ug/kg
		FLUORENE	<100	ug/kg
		4-CHLOROPHENYL PHENYL ETHER	<100	ug/kg
		2,4-DINITROTOLUENE	<100	ug/kg
		DIETHYL PHTHALATE	<100	ug/kg
		N-NITROSODIPHENYLAMINE	<100	ug/kg
		1,2-DIPHENYL HYDRAZINE	<100	ug/kg
		HEXACHLOROBENZENE	<100	ug/kg
		4-BROMOPHENYL PHENYL ETHER	<100	ug/kg
		PHENANTHRENE	<100	ug/kg
		ANTHRACENE	<100	ug/kg
		DI-N-BUTLY-PHTHALATE	<100	ug/kg
		FLUORANTHENE	<100	ug/kg
		PYRENE	<100	ug/kg
		BENZIDENE	<100	ug/kg
		BUTYL BENZYL PHTHALATE	<100	ug/kg
		BIS(2-ETHYLHEXYL) PHTHALATE	<100	ug/kg
		BENZO (a) ANTHRACENE	<100	ug/kg
		CHRYSENE	<100	ug/kg

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
826A8	HA-1,HA-2	3,3'-DICHLOROBENZIDINE	<100	ug/kg
		DI-N-OCTYL PHTHALATE	<100	ug/kg
		BENZO (b) FLUORANTHENE	<100	ug/kg
		BENZO (k) FLUORANTHENE	<100	ug/kg
		BENZO (a) PYRENE	<100	ug/kg
		INDENO (1,2,3-CD) PYRENE	<100	ug/kg
		DIBENZ (a,h) ANTHRACENE	<100	ug/kg
		BENZO (g,h,i,) PERYLENE	<100	ug/kg
		2-METHYLNAPHTHALENE	<100	ug/kg
		BIS(2-CHLOROISOPROPYL) ETHER	<100	ug/kg
		4-CHLOROPHENYL PHENYL ETHER	<100	ug/kg
		HEXACHLOROETHANE	<100	ug/kg
		ALDRIN	<100	ug/kg
		A-BHC	<100	ug/kg
		B-BHC	<100	ug/kg
		C-BHC	<100	ug/kg
		D-BHC	<100	ug/kg
		CHLORODANE	<100	ug/kg
		4,4-DDD	<100	ug/kg
		4,4-DDE	<100	ug/kg
		4,4-DDT	<100	ug/kg
		DIELDRIN	<100	ug/kg
		ENDOSULFAN I	<100	ug/kg
		ENDOSULFAN II	<100	ug/kg
		ENDOSULFAN SULFATE	<100	ug/kg
		ENDRIN	<100	ug/kg
		ENDRIN ALDEHYDE	<100	ug/kg
		HEPTOCHLOR	<100	ug/kg
		HEPTOCHLOR EPOXIDE	<100	ug/kg
		TOXAPHENE	<100	ug/kg
		PCB-1016	<100	ug/kg
		PCB-1221	<100	ug/kg
		PCB-1232	<100	ug/kg
		PCB-1242	<100	ug/kg
		PCB-1248	<100	ug/kg
		PCB-1254	<100	ug/kg
		PCB-1260	<100	ug/kg
		Benzene	239	ug/kg
		Bromodichloromethane	<100	ug/kg
		Bromoform	<100	ug/kg
		Bromomethane	<100	ug/kg
		Carbon Tetrachloride	<100	ug/kg
		Chlorobenzene	<100	ug/kg

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
826A8	HA-1,HA-2	Chloroethane	<100	ug/kg
		2-Chloroethylvinyl Ether	<100	ug/kg
		Chloroform	<100	ug/kg
		Chloromethane	<100	ug/kg
		Dibromochloromethane	<100	ug/kg
		1,2-Dichlorobenzene	<100	ug/kg
		1,3-Dichlorobenzene	<100	ug/kg
		1,4-Dichlorobenzene	<100	ug/kg
		Dichlorodifluoromethane	<100	ug/kg
		1,1-Dichloroethane	<100	ug/kg
		1,2-Dichloroethane	<100	ug/kg
		1,1-Dichloroethene	<100	ug/kg
		Trans-1,2-Dichloroethene	<100	ug/kg
		1,2-Dichloropropane	<100	ug/kg
		Cis-1,3-Dichloropropene	<100	ug/kg
		Trans-1,3-Dichloropropene	<100	ug/kg
		Ethylbenzene	<100	ug/kg
		Methylene Chloride	<100	ug/kg
		1,1,2,2-Tetrachloroethane	<100	ug/kg
		Tetrachloroethene	<100	ug/kg
		Toluene	246	ug/kg
		1,1,1-Trichloroethane	206	ug/kg
		1,1,2-Trichloroethane	<100	ug/kg
		Trichloroethene	<100	ug/kg
		Trichlorofluoromethane	<100	ug/kg
		Xylene	<100	ug/kg

AquaChem
ENVIRONMENTAL LABORATORIES, INC.
11104 DOWNS ROAD
PINEVILLE, NC 28134
704/ 588-5076
FAX 704/ 588-2454

NC Certification Number: 305
SC Certification Number: 99032

Date of Report: April 26, 1991
Date Received: April 16, 1991

Approved By: James C. Taylor
General Manager

Client: Trigon Engineering
P.O. Box 18846
Greensboro, North Carolina 27419-8846

Contact: Scott Pearce

Customer Number: 2021

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
851A1	BP-1	Total Petroleum Hydrocarbons by Method 3550	14302	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	971	mg/kg
851A2	BP-2	Total Petroleum Hydrocarbons by Method 3550	2044	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	221	mg/kg
851A3	BP-2	Arsenic	<0.005	mg/l
		Selenium	<0.005	mg/l
		Cadmium	<0.01	mg/l
		Chromium	<0.05	mg/l
		Lead	<0.05	mg/l
		Mercury	<0.001	mg/l
		Silver	<0.01	mg/l
		Barium	<0.5	mg/l

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
851A4	BP-3	Total Petroleum Hydrocarbons by Method 3550	40	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
851A5	FD-HA	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
851A6	STB-1	Total Petroleum Hydrocarbons by Method 3550	10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
851A7	STB-2	Total Petroleum Hydrocarbons by Method 3550	11	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
851A8	STB-3	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
851A9	MW-3	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
851A9	MW-3	Total Petroleum Hydrocarbons by Method 5030	54	mg/kg
851A10	MW-5	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
851A11	B-20S	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
851A12	B-20N	Total Petroleum Hydrocarbons by Method 3550	<10	mg/kg
		Total Petroleum Hydrocarbons by Method 5030	<1	mg/kg
851A13	MW-1	Total Petroleum Hydrocarbons by Method 3550	5.0	mg/l
		Total Petroleum Hydrocarbons by Method 5030	<0.1	mg/l
		Benzene	<1	ug/l
		Bromodichloromethane	<1	ug/l
		Bromoform	<1	ug/l
		Bromomethane	<1	ug/l
		Carbon Tetrachloride	<1	ug/l
		Chlorobenzene	<1	ug/l
		Chloroethane	<1	ug/l
		2-Chloroethylvinyl Ether	<1	ug/l
		Chloroform	41	ug/l

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
851A13	MW-1	Chloromethane	<1	ug/l
		Dibromochloromethane	<1	ug/l
		1,2-Dichlorobenzene	<1	ug/l
		1,3-Dichlorobenzene	<1	ug/l
		1,4-Dichlorobenzene	<1	ug/l
		Dichlorodifluoromethane	<1	ug/l
		1,1-Dichloroethane	<1	ug/l
		1,2-Dichloroethane	<1	ug/l
		1,1-Dichloroethene	<1	ug/l
		Trans-1,2-Dichloroethene	<1	ug/l
		1,2-Dichloropropane	<1	ug/l
		Cis-1,3-Dichloropropene	<1	ug/l
		Trans-1,3-Dichloropropene	<1	ug/l
		Ethylbenzene	<1	ug/l
		Methylene Chloride	<1	ug/l
		1,1,2,2-Tetrachloroethane	<1	ug/l
		Tetrachloroethene	<1	ug/l
		Toluene	<1	ug/l
		1,1,1-Trichloroethane	<1	ug/l
		1,1,2-Trichloroethane	<1	ug/l
		Trichloroethene	<1	ug/l
		Trichlorofluoromethane	<1	ug/l
		Xylene	<1	ug/l
		Arsenic	<0.005	mg/l
		Selenium	<0.005	mg/l
		Cadmium	<0.01	mg/l
		Chromium	<0.05	mg/l
		Lead	<0.05	mg/l
		Mercury	<0.001	mg/l
		Silver	<0.01	mg/l
		Barium	<0.5	mg/l
851A14	MW-2	Total Petroleum Hydrocarbons by Method 3550	3.0	mg/l
		Total Petroleum Hydrocarbons by Method 5030	<0.1	mg/l
		Benzene	<1	ug/l
		Bromodichloromethane	<1	ug/l
		Bromoform	<1	ug/l
		Bromomethane	<1	ug/l

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
851A14	MW-2	Carbon Tetrachloride	<1	ug/l
		Chlorobenzene	<1	ug/l
		Chloroethane	<1	ug/l
		2-Chloroethylvinyl Ether	<1	ug/l
		Chloroform	34	ug/l
		Chloromethane	<1	ug/l
		Dibromochloromethane	<1	ug/l
		1,2-Dichlorobenzene	<1	ug/l
		1,3-Dichlorobenzene	<1	ug/l
		1,4-Dichlorobenzene	<1	ug/l
		Dichlorodifluoromethane	<1	ug/l
		1,1-Dichloroethane	<1	ug/l
		1,2-Dichloroethane	<1	ug/l
		1,1-Dichloroethene	<1	ug/l
		Trans-1,2-Dichloroethene	<1	ug/l
		1,2-Dichloropropane	<1	ug/l
		Cis-1,3-Dichloropropene	<1	ug/l
		Trans-1,3-Dichloropropene	<1	ug/l
		Ethylbenzene	<1	ug/l
		Methylene Chloride	<1	ug/l
		1,1,2,2-Tetrachloroethane	<1	ug/l
		Tetrachloroethene	<1	ug/l
		Toluene	258	ug/l
		1,1,1-Trichloroethane	<1	ug/l
		1,1,2-Trichloroethane	<1	ug/l
		Trichloroethene	<1	ug/l
		Trichlorofluoromethane	<1	ug/l
		Xylene	<1	ug/l
		Arsenic	<0.005	mg/l
		Selenium	<0.005	mg/l
		Cadmium	<0.01	mg/l
		Chromium	<0.05	mg/l
		Lead	<0.05	mg/l
		Mercury	<0.001	mg/l
		Silver	<0.01	mg/l
		Barium	<0.5	mg/l
851A15	MW-3	Total Petroleum Hydrocarbons by Method 3550	<1.0	mg/l
		Total Petroleum Hydrocarbons by Method 5030	4.0	mg/l

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
851A15	MW-3	Benzene	356	ug/l
		Bromodichloromethane	<1	ug/l
		Bromoform	<1	ug/l
		Bromomethane	<1	ug/l
		Carbon Tetrachloride	<1	ug/l
		Chlorobenzene	<1	ug/l
		Chloroethane	<1	ug/l
		2-Chloroethylvinyl Ether	<1	ug/l
		Chloroform	38	ug/l
		Chloromethane	<1	ug/l
		Dibromochloromethane	<1	ug/l
		1,2-Dichlorobenzene	189	ug/l
		1,3-Dichlorobenzene	<1	ug/l
		1,4-Dichlorobenzene	576	ug/l
		Dichlorodifluoromethane	<1	ug/l
		1,1-Dichloroethane	<1	ug/l
		1,2-Dichloroethane	<1	ug/l
		1,1-Dichloroethene	<1	ug/l
		Trans-1,2-Dichloroethene	<1	ug/l
		1,2-Dichloropropane	<1	ug/l
		Cis-1,3-Dichloropropene	<1	ug/l
		Trans-1,3-Dichloropropene	<1	ug/l
		Ethylbenzene	<1	ug/l
		Methylene Chloride	<1	ug/l
		1,1,2,2-Tetrachloroethane	<1	ug/l
		Tetrachloroethene	363	ug/l
		Toluene	988	ug/l
		1,1,1-Trichloroethane	<1	ug/l
		1,1,2-Trichloroethane	<1	ug/l
		Trichloroethene	<1	ug/l
		Trichlorofluoromethane	<1	ug/l
		Xylene	286	ug/l
		Arsenic	<0.005	mg/l
		Selenium	<0.005	mg/l
		Cadmium	<0.01	mg/l
		Chromium	<0.05	mg/l
		Lead	<0.05	g/l
		Mercury	<0.001	mg/l
		Silver	<0.01	mg/l
		Barium	<0.5	mg/l
851A16	MW-4	Total Petroleum Hydrocarbons by Method 3550	1.0	mg/l

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
851A16	MW-4	Total Petroleum Hydrocarbons by Method 5030	<0.1	mg/l
		Benzene	233	ug/l
		Bromodichloromethane	<1	ug/l
		Bromoform	<1	ug/l
		Bromomethane	<1	ug/l
		Carbon Tetrachloride	<1	ug/l
		Chlorobenzene	<1	ug/l
		Chloroethane	<1	ug/l
		2-Chloroethylvinyl Ether	<1	ug/l
		Chloroform	43	ug/l
		Chloromethane	<1	ug/l
		Dibromochloromethane	<1	ug/l
		1,2-Dichlorobenzene	<1	ug/l
		1,3-Dichlorobenzene	<1	ug/l
		1,4-Dichlorobenzene	<1	ug/l
		Dichlorodifluoromethane	<1	ug/l
		1,1-Dichloroethane	<1	ug/l
		1,2-Dichloroethane	<1	ug/l
		1,1-Dichloroethene	<1	ug/l
		Trans-1,2-Dichloroethene	<1	ug/l
		1,2-Dichloropropane	<1	ug/l
		Cis-1,3-Dichloropropene	<1	ug/l
		Trans-1,3-Dichloropropene	<1	ug/l
		Ethylbenzene	<1	ug/l
		Methylene Chloride	<1	ug/l
		1,1,2,2-Tetrachloroethane	<1	ug/l
		Tetrachloroethene	<1	ug/l
		Toluene	289	ug/l
		1,1,1-Trichloroethane	<1	ug/l
		1,1,2-Trichloroethane	<1	ug/l
		Trichloroethene	<1	ug/l
		Trichlorofluoromethane	<1	ug/l
		Xylene	<1	ug/l
		Arsenic	<0.005	mg/l
		Selenium	<0.005	mg/l
		Cadmium	<0.01	mg/l
		Chromium	<0.05	mg/l
		Lead	<0.05	mg/l
		Mercury	<0.001	mg/l
		Silver	<0.01	mg/l
		Barium	<0.5	mg/l

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
851A17	MW-5	Total Petroleum Hydrocarbons by Method 3550	1.0	mg/l
		Total Petroleum Hydrocarbons by Method 5030	<0.1	mg/l
		Benzene	<1	ug/l
		Bromodichloromethane	<1	ug/l
		Bromoform	<1	ug/l
		Bromomethane	<1	ug/l
		Carbon Tetrachloride	<1	ug/l
		Chlorobenzene	<1	ug/l
		Chloroethane	<1	ug/l
		2-Chloroethylvinyl Ether	<1	ug/l
		Chloroform	8	ug/l
		Chloromethane	<1	ug/l
		Dibromochloromethane	<1	ug/l
		1,2-Dichlorobenzene	<1	ug/l
		1,3-Dichlorobenzene	<1	ug/l
		1,4-Dichlorobenzene	<1	ug/l
		Dichlorodifluoromethane	<1	ug/l
		1,1-Dichloroethane	<1	ug/l
		1,2-Dichloroethane	<1	ug/l
		1,1-Dichloroethene	<1	ug/l
		Trans-1,2-Dichloroethene	<1	ug/l
		1,2-Dichloropropane	<1	ug/l
		Cis-1,3-Dichloropropene	<1	ug/l
		Trans-1,3-Dichloropropene	<1	ug/l
		Ethylbenzene	<1	ug/l
		Methylene Chloride	610	ug/l
		1,1,2,2-Tetrachloroethane	<1	ug/l
		Tetrachloroethene	<1	ug/l
		Toluene	248	ug/l
		1,1,1-Trichloroethane	<1	ug/l
		1,1,2-Trichloroethane	<1	ug/l
		Trichloroethene	<1	ug/l
		Trichlorofluoromethane	<1	ug/l
		Xylene	<1	ug/l
		Arsenic	<0.005	mg/l
		Selenium	<0.005	mg/l
		Cadmium	<0.01	mg/l
		Chromium	<0.05	mg/l
		Lead	<0.05	mg/l

LABORATORY REPORT

LAB ID	SAMPLE ID	PARAMETER	RESULT	UNIT
851A17	MW-5	Mercury	<0.001	mg/l
		Silver	<0.01	mg/l
		Barium	<0.5	mg/l
851A18	MW-4 F.B.	Benzene	<1	ug/l
		Bromodichloromethane	<1	ug/l
		Bromoform	<1	ug/l
		Bromomethane	<1	ug/l
		Carbon Tetrachloride	<1	ug/l
		Chlorobenzene	<1	ug/l
		Chloroethane	<1	ug/l
		2-Chloroethylvinyl Ether	<1	ug/l
		Chloroform	8	ug/l
		Chloromethane	<1	ug/l
		Dibromochloromethane	<1	ug/l
		1,2-Dichlorobenzene	<1	ug/l
		1,3-Dichlorobenzene	<1	ug/l
		1,4-Dichlorobenzene	<1	ug/l
		Dichlorodifluoromethane	<1	ug/l
		1,1-Dichloroethane	<1	ug/l
		1,2-Dichloroethane	<1	ug/l
		1,1-Dichloroethene	<1	ug/l
		Trans-1,2-Dichloroethene	<1	ug/l
		1,2-Dichloropropane	<1	ug/l
		Cis-1,3-Dichloropropene	<1	ug/l
		Trans-1,3-Dichloropropene	<1	ug/l
		Ethylbenzene	<1	ug/l
		Methylene Chloride	578	ug/l
		1,1,2,2-Tetrachloroethane	<1	ug/l
		Tetrachloroethene	<1	ug/l
		Toluene	247	ug/l
		1,1,1-Trichloroethane	<1	ug/l
		1,1,2-Trichloroethane	<1	ug/l
		Trichloroethene	<1	ug/l
		Trichlorofluoromethane	<1	ug/l
		Xylene	<1	ug/l